



1000384

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

RECEIVED  
REGIONAL HEARING  
CLERK

IN THE MATTER OF:

TECHALLOY COMPANY, INC.  
6509 OLSON ROAD  
UNION, ILLINOIS 60180

EPA ID NO. ILD 005 178 975

RESPONDENT

)  
) MODIFICATION TO ADMINISTRATIVE ORDER  
) ORDER ON CONSENT  
)  
) U.S. EPA DOCKET NO. R8H-5-99-008  
)  
) Proceeding under Section 3008(h) of the  
) Resource Conservation and Recovery Act,  
) as amended, 42 U.S.C. § 6928(h)

05 DEC -6 21:54  
US ENVIRONMENTAL  
PROTECTION AGENCY  
REGION V

**I. JURISDICTION**

On September 30, 1999, the United States Environmental Protection Agency (U.S. EPA) issued an Administrative Order on Consent (Consent Order) to Techalloy Company, Inc. (Respondent), the owner and operator of a facility at 6509 Olson Road, Union, Illinois. The Consent Order was issued pursuant to the authority vested in the Administrator of the U.S. EPA by section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6928(h). The authority to issue administrative orders requiring corrective action pursuant to RCRA section 3008(h), which was vested in the Administrator of the U.S. EPA, has been delegated by the Administrator to Regional Administrators by U.S. EPA Delegation No. 8-32, dated May 11, 1994. This authority was further delegated by the Regional Administrator of Region 5 to the Chief of the Enforcement and Compliance Assurance Branch in the Waste, Pesticides and Toxics Division, by EPA Region 5 Delegation 8-32, dated April 24, 1996.

## **II. MODIFICATION**

Pursuant to Section XXIII (MODIFICATION) of the Consent Order, the Consent Order may be modified only by mutual agreement of the U.S. EPA and the Respondent. Section XXIII further states that any modification shall be in writing, shall be signed by both parties, shall have as its effective date the date on which the modification is signed by the U.S. EPA, and shall be incorporated into the September 30, 1999, Consent Order.

Therefore, pursuant to Section XXIII of the Consent Order, the parties by their signatures below agree to modify the Consent Order by substituting Section XXII (FINANCIAL RESPONSIBILITY) with the following language:

### **XXII. FINANCIAL RESPONSIBILITY**

- A. Respondent is providing financial assurance in the amount of five-hundred and sixty-one thousand dollars (\$ 561,000) for the future implementation of the corrective measures selected in this Consent Order, as modified.
- B. Respondent has established this financial assurance, as of the effective date of this Modification to the Consent Order, through a letter of credit in the amount of \$ 561,000, which has been issued by the Bank of Nova Scotia (No. S40006/219856). Respondent also will enter into a standby trust agreement, in a form acceptable to the U.S. EPA, within 30 days of the effective date of this Modification to the Consent Order. The standby trust agreement will be funded by the letter of credit when the circumstances described in Paragraph D, below, arise.
- C. Respondent may wish to change the form of financial assurance that is referenced

in Paragraph B. Or Respondent may need to change the form of financial assurance either because the entity providing the financial assurance has notified the U.S. EPA of its intent to terminate the financial assurance as described in subparagraph D.4, or because the U.S. EPA has notified Respondent that the existing form of financial assurance is inadequate, as described in Paragraph F. In any of these situations, Respondent will submit a written proposal to the U.S. EPA which, at a minimum, will specify the cost of the remaining Work to be performed and the basis upon which such cost was calculated, and will contain a detailed description of the proposed revised form of financial assurance. The U.S. EPA in its sole discretion will decide whether to approve Respondent's proposal; in making that decision the U.S. EPA will consider the financial assurance instruments which are described by 40 C.F.R. § 265.143 and by other related financial assurance regulations. The U.S. EPA shall give Respondent written notification of its decision. After receiving the U.S. EPA's written approval, Respondent may change the form of financial assurance in accordance with that written approval. In the event of a dispute, Respondent may change the form of financial assurance only in accordance with a final administrative decision resolving such dispute under Section XVI (Dispute Resolution). These same provisions apply if Respondent wishes to, or needs to, change the form of financial assurance after the U.S. EPA has approved a first change from the form of financial assurance referenced in Paragraph B.

- D. The U.S. EPA may call upon the letter of credit referenced in Paragraph B, or any

other financial assurance instrument subsequently approved by the U.S. EPA pursuant to Paragraph C, whenever the U.S. EPA determines that one of the following situations exist:

1. Respondent has ceased implementation of any portion of the Work;
2. Respondent is significantly, or has been repeatedly, deficient or late in its performance of the Work;
3. Respondent is implementing the Work in a manner that may cause an endangerment to human health or the environment; or
4. the entity providing the financial assurance has notified the U.S. EPA that it intends to terminate the financial assurance, the Respondent has not provided alternate financial assurance which the U.S. EPA has approved as described in Paragraph C, and forty-five (45) days or less remain before the financial assurance provider will terminate the financial assurance.

The U.S. EPA shall give written notification to Respondent and the financial assurance provider that the U.S. EPA has determined that one of the four situations described in the previous sentence exist. Respondent may dispute the U.S. EPA's determination by invoking the dispute resolution provisions of Section XVI (Dispute Resolution). The U.S. EPA will not call upon the letter of credit or other financial assurance instrument during the pendency of any such dispute, except when a dispute has not been resolved by the date when less than fifteen days remains before the date when the financial assurance provider has stated it intends to terminate the financial assurance; in such situation, the U.S.

EPA will have the right to call upon the financial assurance instrument and to direct the financial assurance provider to make payment to, or for the benefit of, the U.S. EPA in order to allow for continued performance of the Work.

- E. If Respondent believes that the cost to complete the remaining Work has diminished below the amount stated in Paragraph A, Respondent may submit a written proposal to the U.S. EPA to reduce the amount of financial assurance. Respondent's written proposal shall, at a minimum, specify the cost of the remaining Work to be performed and the basis upon which that cost was calculated. The decision whether to approve Respondent's proposal shall be within the U.S. EPA's sole discretion. The U.S. EPA shall give Respondent written notification of its decision. After receiving the U.S. EPA's written approval, Respondent may change the amount of financial assurance in accordance with that written approval. In the event of a dispute, Respondent may reduce the amount of financial assurance only in accordance with a final administrative decision resolving such dispute under Section XVI (Dispute Resolution).
- F. The U.S. EPA may determine that the cost of completing the Work exceeds the amount referenced in Paragraph A (or a different amount of financial assurance which the U.S. EPA has approved pursuant to Paragraph E). If that occurs, the U.S. EPA will notify Respondent in writing, and also will notify Respondent of the amount for which Respondent must provide financial assurance. If requested by the U.S. EPA, Respondent will provide its own determination of the cost of

completing the Work, with calculations. Within sixty (60) days of the date Respondent receives the U.S. EPA's notification of the new amount of financial assurance required, unless that time is extended by the U.S. EPA in writing, Respondent shall establish financial assurance in that amount through an instrument approved by the U.S. EPA pursuant to Paragraph C. In addition, the U.S. EPA may determine that the financial assurance instrument referenced in Paragraph B (or another instrument subsequently established with the U.S. EPA's approval pursuant to Paragraph C) is inadequate. Within sixty (60) days after the date Respondent receives the U.S. EPA's written notification of inadequacy, unless that time is extended by the U.S. EPA in writing, Respondent shall remedy the inadequacy of the particular financial instrument or shall establish an alternate financial assurance instrument which has been approved by the U.S. EPA pursuant to Paragraph C. Respondent may dispute a determination made pursuant to this Paragraph by the U.S. EPA either as to the cost of completing the Work or as to the inadequacy of an existing financial assurance instrument by invoking the dispute resolution provisions of Section XVI (Dispute Resolution).

- G. Respondent may submit to the U.S. EPA a written request that it be released from the requirement to maintain financial assurance under this Section of this Consent Order at such time as the U.S. EPA and Respondent have both executed an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" pursuant to Section XXVI (Termination and Satisfaction). The U.S. EPA shall notify both the Respondent and the entities providing the

financial assurance that Respondent is released from all financial assurance obligations under this Consent Order. The provider of the financial assurance may be released from its obligations only upon receipt of such a release from the U.S. EPA or as otherwise specifically provided by the relevant financial assurance instrument.

- H. Respondent's inability to maintain financial assurance in the amount stated in Paragraph A, or another amount approved by the U.S. EPA pursuant to this Section, shall in no way excuse performance of any other requirements of this Consent Order, including Respondent's obligation to complete the Work.

IT IS SO AGREED AND ORDERED:

DATE: 11/15/05

BY: Henry Lopes  
HENRY LOPES, Vice President Operations  
TECHALLOY COMPANY, INC.  
RESPONDENT

DATE: November 29, 2005

BY: Joseph M. Boyle, for  
MARGARET M. GUERRIERO, Director  
WASTE, PESTICIDES, AND TOXICS DIVISION  
REGION 5, U.S. EPA

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:	)	
	)	
TECHALLOY COMPANY, INC.	)	MODIFICATION TO
6509 OLSON ROAD	)	ADMINISTRATIVE ORDER
UNION, ILLINOIS 60180	)	ON CONSENT
	)	
EPA ID NO. ILD 005 178 975	)	U.S. EPA DOCKET NO.:
	)	R8H-5-99-008
	)	
RESPONDENT	)	Proceeding under Section
	)	3008(h) of the Resource
	)	Conservation and Recovery
	)	Act, as amended 42 U.S.C.
	)	\$6928(h).

**I. JURISDICTION**

On September 30, 1999, an Administrative Order on Consent ("Consent Order") was issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency ("U.S. EPA") by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority to issue administrative orders requiring corrective action pursuant to RCRA 3008(h) vested in the Administrator has been delegated to the Regional Administrators by U.S. EPA Delegation No. 8-32, dated May 11, 1994. This authority was further delegated by the Regional Administrator of Region 5 to the Chief of the Enforcement and Compliance Assurance Branch in the Waste, Pesticides and Toxics Division, by EPA Region 5



Delegation 8-32, dated April 24, 1996.

The Consent Order was issued to Techalloy Company, Inc.

("Techalloy" or "Respondent"), the owner/operator of a facility at 6509 Olson Road, Union, Illinois.

## II. MODIFICATION

Pursuant to Section XXIII (MODIFICATION) of the September 30, 1999, Consent Order, the Consent Order may only be modified by mutual agreement of U.S. EPA and Respondent. Section XXIII further states that any modification shall be in writing, shall be signed by both parties, shall have its effective date the date on which the modification is signed by U.S. EPA, and shall be incorporated into the September 30, 1999, Consent Order.

Therefore, pursuant to Section XXIII of the Consent Order, the parties by their signatures below agree to modify the Consent Order by substituting paragraph F in Section VIII (WORK TO BE PERFORMED) with the following language:

### VIII. WORK TO BE PERFORMED

#### F. Asphalt Cap

1. Respondent shall install the asphalt cap at the area indicated in Exhibit D. Respondent shall not be required to implement Task II.A, II.B, and II.D set forth in Attachment I. Respondent shall install the asphalt cap in accordance with Task II.C of Attachment I. The asphalt cap installation shall be completed by November 15, 2001. Respondent shall notify U.S. EPA in writing of the completion of the asphalt cap

installation within fifteen (15) days of such completion.

2. Following installation of the asphalt cap, Respondent shall perform groundwater monitoring on a semi-annual (twice a year) basis for total metals (Method 6010B) at the following wells: MW2, MW4, MW5, MW5D, MW6, MW7, MW8, MW9 and the Highbridge Well. Respondent shall provide U.S. EPA with the results of each round of semi-annual groundwater sampling for metals when submitting the next Progress Report, except that if MCLs for metals are exceeded at the Highbridge Well, Respondent shall notify U.S. EPA within fifteen (15) days of obtaining the results. If U.S. EPA determines that additional work is necessary, it shall be accomplished pursuant to Section VIII, paragraph Q of this Consent Order.

Furthermore, the parties explicitly acknowledge that, by substituting the above paragraph F for the paragraph F that appears in Section VIII of the September 30, 1999, Consent Order, the soil stabilization area at the Facility is no longer designated to be a Corrective Action Management Unit.

A new Exhibit D is attached to this Modification, and replaces the Exhibit D which was attached to the Consent Order.

IT IS SO AGREED AND ORDERED:

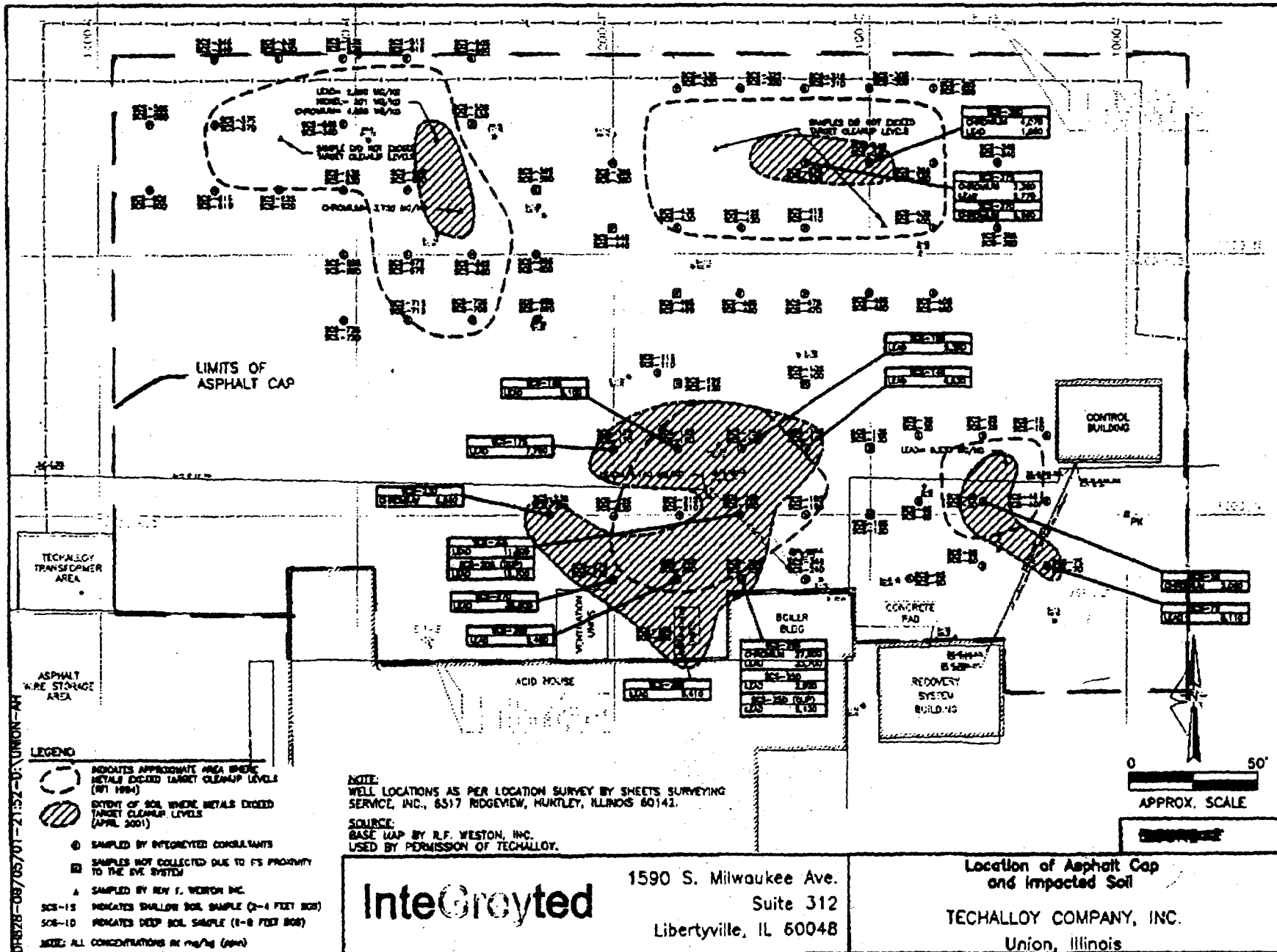
DATE: 10/17/01

BY: [Signature]  
TECHALLOY COMPANY, INC.  
RESPONDENT

DATE: October 29, 2001

BY: Joseph M. Boyle  
JOSEPH M. BOYLE, CHIEF  
ENFORCEMENT AND COMPLIANCE  
ASSURANCE BRANCH  
WASTE, PESTICIDES AND  
TOXICS DIVISION  
U.S. EPA, REGION 5

# EXHIBIT D





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

December 14, 1998

**SENT BY FACSIMILE AND  
FIRST CLASS MAIL**

Ms. Margaret Rosegay  
Pillsbury, Madison and Sutro  
235 Montgomery Street  
San Francisco, CA 94104  
Facsimile: 415/983-1200

Re: Techalloy Company, Inc.  
Consent Order for Corrective Measures Implementation

Dear Ms. Rosegay:

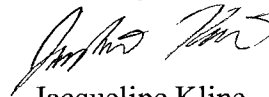
To introduce myself, I am the U.S. EPA attorney who is working on the Techalloy consent order matter. I have received a copy of what I was told were your handwritten comments on the proposed consent order U.S. EPA sent Techalloy during September 1998. In addition, William Buller of U.S. EPA has had a number of discussions with Techalloy's consultant regarding changes to the proposed consent order.

After reviewing your comments and after incorporating the changes as to which Mr. Buller and Techalloy's consultant have agreed, I have revised certain consent order provisions. Enclosed you will find the complete sections entitled Work to be Performed, Access, Delay in Performance/Stipulated Penalties, Reservation of Rights, Indemnification of the United States Government, and Financial Responsibility. These are the sections on which you have commented, and the enclosed pages reflect those revisions to the consent order to which U.S. EPA is amenable. You will see that U.S. EPA has accepted many of your comments verbatim, and has accepted the substance of other comments while proposing different wording -- wording that previously has been approved by U.S. EPA management.

Two items that I wish to point out are: 1) in the Reservation of Rights section, you had proposed to add certain language on Respondent's reserving its rights; I agree with the substance of your proposal, but rather than placing such language in paragraph A, I have added language to paragraph H, where it seemed to me to fit more appropriately. 2) U.S. EPA agrees that monthly progress reports will be due on the fifteenth day of each month, rather than on the tenth day (I have not provided you with a copy of the page containing that change).

Please review the enclosed pages and let me know whether we can now proceed with finalizing the consent order. If so, I will forward to you or to your client (as you direct) final copies of the consent order, with exhibits and attachments, for Techalloy's signature. My telephone number is 312/886-7167, and my facsimile number is 312/886-0747. Thank you for your time and cooperation.

Sincerely,



Jacqueline Kline  
Associate Regional Counsel

Enclosure

cc: William Buller, U.S. EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

August 20, 1999

Mr. Philippe Maitrepierre  
President  
Techalloy Company, Inc.  
370 Franklin Turnpike  
Mahwah, New Jersey 07430

Re: RCRA Consent Order for Corrective Measures Implementation at the  
Techalloy Company Facility in Union, Illinois


Dear Mr. Maitrepierre:

Enclosed are two copies of a RCRA Section 3008(h) Administrative Consent Order regarding implementation of corrective measures at your company's facility in Union, Illinois. This version of the Order has been changed to acknowledge the installation of the second groundwater extraction well, as you have requested. Your attorney, Margaret Rosegay, and I have discussed all of the changes that appear in this version of the Order.

Please sign both copies of the Order at your earliest convenience. Then have your office return both signed copies to me. I will ensure that the appropriate U.S. EPA officials sign the Order. One original copy of the final and fully-executed Order will be returned to you.

If you or your attorney have any further concerns or questions, please call me at 312/886-7167. Thank you for your company's cooperation throughout the history of this matter.

Sincerely,

  
Jacqueline Kline  
Associate Regional Counsel

Enclosures

cc: Margaret Rosegay, Esq.  
Pillsbury, Madison and Sutro

Michael Valentino, U.S. EPA

R8H-5-99-008

U.S. Environmental Protection Agency

RCRA SECTION 3008(h) CONSENT ORDER

for

CORRECTIVE MEASURES IMPLEMENTATION

TECHALLOY COMPANY, INC.

U.S. EPA I.D. #ILD 005 178 975



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#### EXHIBITS

- EXHIBIT A Residential Wells Used for Drinking Water
- EXHIBIT B Residential Well - Highbridge Road
- EXHIBIT C Groundwater Recovery System Capture Zone
- EXHIBIT D Corrective Action Management Unit (CAMU) Site Layout

#### ATTACHMENTS

- I. CORRECTIVE MEASURES IMPLEMENTATION PROGRAM - SCOPE OF WORK
- II. ACKNOWLEDGMENT OF TERMINATION

## ABBREVIATIONS AND ACRONYMS

AOC	Area of Concern
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMI	Corrective Measure Implementation
CMS	Corrective Measure Study
DOCC	Description of Current Conditions
DQO	Data Quality Objective
EPA	United States Environmental Protection Agency
HWMU	Hazardous Waste Management Unit
IM	Interim Measures
MCL	Maximum Contaminant Level
mg/kg	milligram per kilogram
mg/l	milligram per liter
NPDES	National Pollution Discharge Elimination System
PA	Preliminary Assessment
ppm	parts per million
ppb	parts per billion
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control

RA	Release Assessment
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SOW	Scope of Work
SWMU(s)	Solid Waste Management Unit(s)
$\mu\text{g/kg}$	micrograms per kilogram
$\mu\text{g/l}$	micrograms per liter
U.S.C.	United States Code
U.S. EPA	United States Environmental Protection Agency
VSI	Visual Site Inspection

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:

TECHALLOY COMPANY, INC.  
6509 OLSON ROAD  
UNION, ILLINOIS 60180

US EPA ID NO. ILD 005 178 975  
RESPONDENT.

ADMINISTRATIVE ORDER ON CONSENT  
FOR CORRECTIVE MEASURES  
IMPLEMENTATION

U.S. EPA Docket No. ~~RCRA-VW-007-93~~

**R8H-5-99-008**

Proceeding under Section 3008(h)  
of the Resource Conservation and  
Recovery Act, as amended,  
42 U.S.C. § 6928(h)

---

I. JURISDICTION

A. This ADMINISTRATIVE ORDER ON CONSENT (Order) for Corrective Measures Implementation is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority vested in the Administrator to issue this Order has been delegated to the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides and Toxics Division, Region 5, U.S. EPA.

B. This Order is issued to Techalloy Company, Inc. (Respondent), the owner and operator of a facility at 6509 Olson Road, Union, Illinois (the Facility).

C. Respondent consents to and agrees not to contest U.S. EPA's jurisdiction to issue this Order and to enforce its terms. Further, Respondent will not contest U.S. EPA's jurisdiction to:

1. Compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial;
2. Require Respondent's full or interim compliance with the terms of this Order; or
3. To impose sanctions for violations of this Order.

## II. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the definitions given to them in RCRA or in such regulations.

Acceptable in the phrase "In a manner acceptable to U.S. EPA ..." shall mean that submittals or completed work meet the terms and

conditions of this Order, attachments, scopes of work, approved workplans and/or U.S. EPA's written comments and guidance documents.

Additional Work shall mean any activity or requirement that is not expressly covered by this Order or its attachments but is determined by U.S. EPA to be necessary to fulfill the purposes of this Order as presented in Section III: Statement of Purpose.

Administrative Record shall mean the record compiled and maintained by U.S. EPA supporting this Order.

Area of Concern shall mean any area of the Facility under the control or ownership of the owner or operator where a release to the environment of hazardous wastes or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release.

CERCLA shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.

Comply or compliance may be used interchangeably and shall mean the performance of work required by this Order of a quality which

is acceptable to and approvable by U.S. EPA and in the manner and time specified in this Order or any modification thereof, its attachments or any modification thereof, or written U.S. EPA directives. Respondent must meet both the quality and timeliness components of a particular requirement to be considered in compliance with the terms and conditions of this Order.

Contractor shall include any contractor, subcontractor, consultant or laboratory retained to conduct or monitor any portion of the work performed pursuant to this Order.

Corrective measures shall mean those measures or actions necessary to control, prevent, or mitigate the release or potential release of hazardous waste or hazardous constituents into the environment.

Corrective Measures Implementation or CMI shall mean those activities necessary to initiate, complete, monitor, and maintain the remedies U.S. EPA has selected or may select to protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility. The CMI requirements are detailed



in Section VIII of the Order and the CMI Scope of Work included as Attachment I.

Corrective Measures Study or CMS shall mean the investigation and evaluation of potential remedies which will protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility.

Data Quality Objectives shall mean the qualitative or quantitative statements derived from the Data Quality Objective process that clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions.

Day shall mean a calendar day unless expressly stated to be a business day. Business day shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next business day.

EPA or U.S. EPA shall mean the United States Environmental Protection Agency, and any successor Departments or Agencies of the United States.

Facility shall mean all contiguous property under the control of the owner and/or operator.

Hazardous Constituents shall mean those constituents listed in Appendix VIII to 40 CFR Part 261 or any constituent identified in Appendix IX to 40 CFR Part 264.

Hazardous Waste shall mean hazardous waste as defined in Section 1004(5) of RCRA or 40 CFR 260.10. This term includes hazardous constituents as defined above.

Hazardous Waste Management Unit or HWMU shall mean a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a hazardous waste management unit; the

unit includes containers and the land or pad upon which they are placed.

Innovative Treatment Technologies shall mean those technologies for treatment of soil, sediment, sludge, and debris other than incineration or solidification-stabilization and those technologies for treatment of groundwater contamination that are alternatives to pumping with conventional treatments like air stripping and ultraviolet light oxidation.

Interim Measures or IM shall mean those actions, which can be initiated in advance of implementation of the final corrective action for the Facility, to achieve the goal of stabilization. Interim Measures initiate cleanup at the Facility and control or eliminate the release or potential release of hazardous wastes at or from the Facility.

RCRA Facility Investigation or RFI shall mean the investigation and characterization of the source(s) of contamination and the nature, extent, direction, rate, movement, and concentration of the source(s) of contamination and releases of hazardous waste, including hazardous constituents, that have been or are likely to be released into the environment from the Facility.

Receptors shall mean those humans, animals, or plants and their habitats which are or may be affected by releases of hazardous waste from or at the Facility.

Release shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the environment.

Scope of Work or SOW shall mean the outline of work Respondent must use to develop all workplans and reports required by this Order as set forth in this Order and its Attachments. All SOW Attachments and modifications or amendments thereto are incorporated into this Order and are an enforceable part of this Order.

Solid Waste Management Unit or SWMU shall mean any discernible unit at which solid wastes have been placed at any time irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a Facility where solid wastes have been routinely and systematically released.

Stabilization shall mean controlling or abating immediate threats to human health and/or the environment from releases and/or preventing or minimizing the spread of contaminants while long-term corrective measures alternatives are being evaluated or implemented.

Submittal shall include any workplan, report, progress report, or any other written document Respondent is required by this Order to send to U.S. EPA.

Violations of this Order shall mean those actions or omissions, failures or refusals to act by Respondent that result in a failure to meet the terms and conditions of this Order or its attachments.

Work or Obligation shall mean any activity Respondent must perform to comply with the requirements of this Order and its attachments.

Workplans shall mean the detailed plans prepared by Respondent to satisfy the requirements of the corresponding Scope of Work or the requirements presented in Section VIII: Work to be Performed.

### III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of U.S. EPA and Respondent are:

- A. To implement the corrective measures selected by U.S. EPA at the Facility; and
- B. To perform any other activities necessary to correct or evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste at or from the Facility.

### IV. PARTIES BOUND

- A. This Order shall apply to and be binding upon U.S. EPA, Respondent and its officers, directors, employees, agents, successors and assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors, acting on behalf of Respondent.
- B. No change in ownership or corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order. Any conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall not affect Respondent's obligations

under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of Respondent by the terms and conditions of the Order, regardless of Respondent's use of employees, agents, or contractors to perform any such tasks.

- C. Respondent shall provide a copy of this Order to all contractors and laboratories retained to conduct or monitor any portion of the work performed pursuant to this Order within fourteen (14) days of the issuance of this Order or the retention of such person(s), whichever occurs later, and shall condition all such contracts on compliance with the terms of this Order.
- D. Respondent shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of the Facility or a portion thereof and shall notify U.S. EPA in writing within thirty (30) days prior to such transfer.
- E. Respondent agrees to undertake all actions required by the terms and conditions of this Order, including any portions of this Order incorporated by reference.

- F. Respondent waives any rights to request a hearing on this matter pursuant to §3008(b) of RCRA and 40 CFR Part 24, and consents to the issuance of this Order without a hearing pursuant to §3008(b) of RCRA as a Consent Order issued pursuant to §3008(h) of RCRA.

#### **V. FINDINGS OF FACT**

- A. Respondent is a company doing business in the State of Illinois and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15), and 40 CFR 260.10.
- B. Respondent is a generator of hazardous waste and an owner and/or operator of a hazardous waste management facility located at 6509 Olson Road, Union, Illinois. Respondent engaged in treatment, storage, or disposal of hazardous waste at the Facility subject to interim status requirements of 40 CFR Part 265.
- C. Respondent owned and/or operated the Facility as a hazardous waste management facility on or after November 19, 1980.
- D. Pursuant to Section 3010 of RCRA, Respondent notified U.S. EPA of its hazardous waste activity. In its notification dated August 15, 1980, Respondent identified itself as a



generator of hazardous waste and an owner/operator of a treatment, storage, and disposal facility for hazardous waste.

E. In its Part A permit application dated January 18, 1988, Respondent identified itself as handling the following hazardous wastes at the Facility:

1. Hazardous waste exhibiting the characteristic of corrosivity (U.S. EPA Hazardous Waste Code No. D002);
2. Hazardous waste exhibiting the characteristic of reactivity (U.S. EPA Hazardous Waste Code No. D003).

F. A Preliminary Assessment/Visual Site Inspection (PA/VSI) of Respondent's Facility, conducted under U.S. EPA authority on November 8, 1991, revealed the following Solid Waste Management Units: (1) hazardous wastewater treatment facility (acid treatment unit); (2) wire slag disposal area; (3) copper cyanide waste destruction tanker unit (4) BG-5 oil drums; (5) concrete evaporation pad; (6) spent acid holding pond; and (7) plating wastewater disposal area. The PA/VSI also identified an area of Concern, the acid tankroom (acid pits). The hazardous wastewater treatment facility,

the copper cyanide waste destruction unit, and the acid tank room were determined to be hazardous waste management units.

- G. Investigations in 1990 and 1991 revealed that groundwater underlying Respondent's Facility was contaminated with volatile organic compounds and that the groundwater contamination extended approximately 4000 feet northwest of the Facility.
- H. On January 27, 1993, U.S. EPA issued to Respondent an Administrative Order on Consent, pursuant to Section 3008(h) of RCRA. The January 27, 1993, Order required Respondent to: implement selected Interim Measures; complete a RCRA Facility Investigation (RFI); and perform a Corrective Measures Study (CMS). On November 6, 1997, Respondent was ordered by U.S. EPA to upgrade the groundwater recovery system that had been installed as an interim measure, in order to increase the size of the capture zone. Respondent installed a second groundwater extraction well which became operational in March 1999. The groundwater recovery system has been demonstrated to create the capture zone required by U.S. EPA, as depicted in Exhibit C of this Order.

- I. U.S. EPA issued a Statement of Basis which was made available to the public for a forty-five (45) day comment period from February 10, 1998, to March 30, 1998.
- J. On May 26, 1998, the Regional Administrator of Region V signed a RCRA Final Decision for the Facility. The Final Decision prescribes the following corrective measures:
1. institutional controls consisting of a Facility deed restriction, and a county restriction on water well drilling permits;
  2. continuance of the private well sampling program;
  3. implementation of soil stabilization technology to address metal contaminants;
  4. continued operation of an existing off-site groundwater recovery system (which has been upgraded since issuance of the RCRA Final Decision);
  5. implementation of a focused air sparge/soil vapor extraction system to treat soils and groundwater contaminated with volatile organic compounds;
  6. groundwater monitoring.

## VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above and after consideration of the Administrative Record, the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides and Toxics Division, Region 5, U.S. EPA, has made the following conclusions of law and determinations:

- A. Respondent is a "person" within the meaning of Section § 1004(15) of RCRA, 42 U.S.C. § 6903(15);
- B. Respondent is the owner or operator of a Facility that is operating under interim status subject to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e);
- C. Certain wastes found at the Facility are hazardous wastes pursuant to Sections 1004(5) and 3001 of RCRA, 42 U.S.C. §§ 6903(5) and 6921, and 40 CFR Part 261;
- D. There is or has been a release of hazardous wastes into the environment from the Facility; and
- E. The actions required by this Order are necessary to protect human health and/or the environment.

## VII. PROJECT COORDINATOR

- A. Within fifteen (15) days of the effective date of this Order, U.S. EPA and Respondent shall each designate a Project Coordinator. Respondent shall notify U.S. EPA in writing of the Project Coordinator it has selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in their absence. U.S. EPA's Project Coordinator will be U.S. EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and U.S. EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.
- B. Respondent may change its Project Coordinator but agrees to provide at least fourteen (14) days written notice prior to changing its Project Coordinator. Respondent shall notify U.S. EPA within five (5) days of any anticipated change in its Project Coordinator.
- C. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

### VIII. WORK TO BE PERFORMED

- A. Pursuant to Section 3008(h) of RCRA, Respondent agrees to and is hereby ordered to perform the acts specified in this section, in the manner and by the dates specified herein. All work and/or submittals required by this Order are subject to U.S. EPA approval in accordance with Section IX: Agency Approvals/Proposed Contractor. All work undertaken pursuant to this Order shall be performed in a manner consistent with, at a minimum: the attached Scope of Work; all U.S. EPA-approved workplans or submittals; RCRA and other applicable Federal laws and their implementing regulations; and applicable U.S. EPA guidance documents.
- B. Respondent specifically and expressly agrees to timely and adequately apply for any and all permits or authorizations required for work conducted pursuant to this Order. Delays in obtaining any required approval or permit from U.S. EPA or other entities that result despite Respondent's complete, timely and appropriate submission of all information and documentation required for approval, including applications for permits, within a time frame that would allow the work to proceed in a manner contemplated by the schedule in the

Order, Final Design, and/or workplans, are subject to Section XVII: Force Majeure and Excusable Delay.

C. All work undertaken pursuant to this Order shall include and be performed in a manner consistent with, at a minimum: the Scope of Work for the Corrective Measures Implementation (CMI) Program set forth in Attachment I, the approved Final Design, any workplans, and other submittals including plans and schedules for additional work required pursuant to paragraph Q of this Section; the Quality Assurance Project Plan; the Health and Safety Plan; and applicable U.S. EPA guidance documents.

D. Private Wells

1. Within thirty (30) days of the effective date of this Order, Respondent shall make an offer in writing to each of the property owners identified in Exhibit A to provide the property with connection to the city water supply system of Union, Illinois. If a property owner accepts such offer, within one hundred and eighty (180) days of receiving that owner's acceptance in writing Respondent shall provide for connection to the city water supply system and, if the owner permits,

also shall arrange for the abandonment of the well at the property. The wells shall be abandoned and closed pursuant to local and State regulations.

2. For any property identified in Exhibit A as to which the owner refuses connection to the city water supply system, and also for the property identified in Exhibit B, Respondent shall perform quarterly sampling and analysis of the residential wells in accordance with the Private Well Sampling Plan (PWSP) dated May 1993. Respondent shall provide the sampling results to the property owners and to U.S. EPA within fifteen (15) days of receipt of the sampling results. Quarterly sampling of the residential wells shall continue until U.S. EPA notifies Respondent in writing that sampling and analysis of some or all of the wells is no longer required, or that the sampling schedule has been revised. If U.S. EPA determines that additional residential wells in or near the City of Union require sampling pursuant to the PWSP, U.S. EPA will notify Respondent of this determination and specify the sampling schedule for those additional wells.



3. If in the future a property owner identified in Exhibit A who previously refused connection to the city water supply advises Respondent or U.S. EPA that he or she wishes to be connected to the municipal water supply, within one hundred and eighty (180) days of such notification Respondent shall provide that property with connection to the city water supply system, and if the property owner consents also shall provide for the proper abandonment of the well on that property.

E. Respondent shall operate the upgraded Groundwater Recovery System so that it continues to create the capture zone as depicted in Exhibit C of this Order. The upgraded Groundwater Recovery System shall remain operational until the performance standards as specified in the approved Final Design are achieved. The performance standards shall be protective of human health and the environment.

F. Soil Stabilization

1. Respondent shall implement soil stabilization treatment at the Facility in accordance with TASK II of Attachment I. Pursuant to 40 CFR 264.552, the general area to undergo soil stabilization is designated a

Corrective Action Management Unit (CAMU), or its regulatory equivalent should relevant RCRA rule changes occur. If the effective date of this Order pre-dates a June 15 date, the soil stabilization shall be completed within one-hundred and fifty (150) days of the effective date of this Order. If the effective date of this Order post-dates a June 15 date, the soil stabilization shall be completed by September 15 of the following year. During the bench-scale studies, Respondent shall submit to U.S. EPA weekly reports which summarizes the activities and include all test data developed during the reporting period. The soil stabilization treatment shall achieve the performance standards given at B.5 of Task II, Attachment I, unless U.S. EPA approves in writing alternate performance standards. Soils that do not meet the treatment performance standards shall be disposed off-site pursuant to applicable State and Federal regulations. Proper dust control procedures shall be employed throughout implementation of the soil stabilization treatment. Within forty-five (45) days of completion of the soil stabilization treatment, Respondent shall

provide to U.S. EPA a report which documents the completion of the soil stabilization treatment.

2. Respondent shall install the asphalt cap for the soil stabilized area (CAMU) in accordance with Task II of Attachment I. If the soil stabilization treatment is completed before a September 15 date, the asphalt cap installation shall be completed within sixty (60) days of completion of the soil stabilization. If the soil stabilization is completed after a September 15 date, the asphalt cap installation shall be completed by June 15 of the following year. Respondent shall notify U.S. EPA of completion of the asphalt cap installation within fifteen (15) days of such completion.
3. Pursuant to 40 CFR 264.552(e)(4), and in accordance with TASK II and TASK III of Attachment I, Respondent shall complete closure for the CAMU and perform post-closure care for the CAMU.

- G. Upon completion of the asphalt cap installation, Respondent shall revise the December 17, 1997, Facility deed restriction to require proper maintenance of the asphalt cap and the chain link fence at the Facility. The revised deed

shall be recorded within sixty (60) days of completion of the asphalt cap installation.

- H. Respondent shall collect additional field data as needed, perform a pilot study and preliminary testing as needed to support a design for the air sparge/soil vapor extraction (AS/SVE) system. Within one hundred and twenty (120) days of completion of the asphalt pad installation, Respondent shall submit to U.S. EPA a Draft Final Design for corrective measures which includes the elements of TASK III of Attachment I.
- I. Within forty-five (45) days of receipt of U.S. EPA's comments on the Draft Final Design, Respondent shall submit a revised Final Design that fully addresses U.S. EPA's comments.
- J. Within one-hundred and twenty (120) days of approval of the Final Design by U.S. EPA, the AS/SVE system shall be fully operational and shall continue to operate until the performance standards are obtained as specified in the approved Final Design. The performance standards shall be protective of human health and the environment.

- K. Respondent shall perform sampling and analysis of monitoring wells in accordance with the specifications provided in an approved Final Design.
- L. Pursuant to Illinois Administrative Code 725 Subpart G, Respondent shall complete RCRA closure of the hazardous waste management units: (1) acid treatment unit; (2) acid pits; (3) copper cyanide destruction tanker unit. Nothing herein shall be construed to prohibit, after closure of the acid pits, the operation of the acid pits in accordance with the requirements applicable to generators who accumulate waste in tanks or containers.
- M. Respondent acknowledges and agrees that nothing in this Order constitutes a warranty or representation of any kind by U.S. EPA that compliance with the work requirements set forth in the Final Design or Scope of Work of Attachment I will achieve the performance standards. Respondent's compliance with the work requirements shall not foreclose U.S. EPA from seeking compliance with all terms and conditions of this Order, including, but not limited to, achievement of the applicable performance standards.

- N. If U.S. EPA concludes the work or any portion thereof has not been completed in accordance with this Order, U.S. EPA will notify Respondent in writing of the activities necessary to complete the work. Within thirty (30) days of such notice, Respondent shall submit a schedule for the performance of such activities to U.S. EPA for approval. Respondent shall perform all activities described in the notice in accordance with the U.S. EPA-approved specifications and schedules established therein.
- O. If Respondent concludes that the performance standards specified in the approved Final Design have been attained to the degree that the operation of the AS/SVE System and/or the Groundwater Recovery system may be modified as prescribed in the Final Design, prior to any operational modification Respondent shall provide forty-five (45) days advance notification of such modification in writing to U.S. EPA. Sufficient data to support the operational modification shall be provided with the notification.
- P. Interim Measures
1. In the event Respondent identifies an immediate or potential threat to human health and/or the

environment, discovers new releases or potential releases of hazardous waste or hazardous constituents, or discovers new solid waste management units not previously identified, at or from the Facility, Respondent shall notify the U.S. EPA Project Coordinator orally within forty-eight (48) hours of discovery and notify U.S. EPA in writing within seven (7) days of such discovery summarizing the immediacy and magnitude of the potential actual threats to human health or the environment. Upon written request by U.S. EPA, Respondent shall submit to U.S. EPA an Interim Measures (IM) Workplan and implementation schedule in accordance with the schedule and Scope of Work established by U.S. EPA. If U.S. EPA determines that immediate action is required, the U.S. EPA Project Coordinator may orally authorize Respondent to act prior to U.S. EPA's receipt and/or approval of the IM Workplans. Respondent shall implement the IM Workplan as approved by U.S. EPA.

2. If U.S. EPA identifies an immediate or potential threat to human health or the environment, discovers new releases of hazardous waste or hazardous constituents,

or discovers new solid waste management units not previously identified, U.S. EPA will notify Respondent in writing. Within thirty (30) days of receiving U.S. EPA's written notification, Respondent shall submit to U.S. EPA an IM Workplan, in accordance with the schedule and IM Scope of Work established by U.S. EPA, that identifies interim measures which will mitigate the threat. If U.S. EPA determines that immediate action is required, the U.S. EPA Project Coordinator may orally require Respondent to act prior to Respondent's receipt of U.S. EPA's written notification. Respondent shall implement the IM Workplan as approved by U.S. EPA.

3. All IM Workplans shall ensure that the interim measures are designed to mitigate all immediate or potential threats to human health or the environment, and should be consistent with the objectives of, and contribute to the performance of, the long-term remedy that is required at the Facility.

Q. Additional Work



1. U.S. EPA may determine or Respondent may propose that certain tasks, including but not limited to investigatory work, engineering evaluation, design/construction, or procedure/methodology modifications, are necessary in addition to or in lieu of the tasks included in any U.S. EPA-approved work plan or submittal, when such additional work is necessary to meet the purposes set forth in Section III: Statement of Purpose.
2. U.S. EPA will notify Respondent in writing and specify the basis for its determination that additional work is necessary. Within thirty (30) days after receipt of such determination, Respondent shall have the opportunity to meet or confer with U.S. EPA to discuss the additional work.
3. If required by U.S. EPA, Respondent shall submit for U.S. EPA approval a workplan for the additional work. U.S. EPA shall specify the contents of such workplan. Such workplan shall be submitted within sixty (60) days of receipt of U.S. EPA's determination that additional work is necessary, or according to an alternative schedule by U.S. EPA.

4. Upon approval of a workplan by U.S. EPA, Respondent shall implement it in accordance with the schedule and provisions contained therein.

## IX. AGENCY APPROVALS/PROPOSED CONTRACTOR

### A. Agency Approvals

1. U.S. EPA will provide Respondent with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments for any workplan, report (except progress reports), specification, or schedule submitted pursuant to or required by this Order. U.S. EPA will provide a statement of reasons for any approval with conditions and/or modifications, disapproval, or disapproval with comments.
2. Within forty-five (45) days of receipt of U.S. EPA's disapproval, or disapproval with comments, Respondent shall revise and submit an approvable workplan, report, specification, or schedule in accordance with U.S. EPA's written comments.
3. Any disapproval or disapproval with comments of a revised and resubmitted workplan, report,

specification, or schedule shall be deemed a violation of this Order and subject Respondent to the stipulated penalties provision found at Section XV.A.2 unless waived by U.S. EPA.

4. Upon receipt of U.S. EPA's written approval or approval with conditions and/or modifications, Respondent shall commence work and implement any such workplan in accordance with the schedule and provisions contained therein and U.S. EPA's written directions thereon.
5. Any U.S. EPA-approved report, workplan, specification, or schedule shall be deemed incorporated into this Order. Prior to U.S. EPA's written approval, no workplan, report, specification, or schedule shall be construed as approved and final. Oral advice, suggestions, or comments given by U.S. EPA representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered as binding.

B. Proposed Contractor

1. All work performed pursuant to this Order shall be under the direction and supervision of a professional

engineer, hydrologist, geologist, or environmental scientist with expertise in hazardous waste or contaminated soil and groundwater site cleanup. Respondent's contractor shall have the technical expertise sufficient to adequately perform all aspects of the work for which it is responsible.

2. Respondent shall notify U.S. EPA in writing of the name, title, and qualifications of the principal engineer, hydrologist, geologist, or environmental scientist to be used in carrying out the terms of this Order within fourteen (14) days of the effective date of this Order.
3. Respondent shall identify whether any contractor is on the List of Parties Excluded for Federal Procurement or Non-Procurement Programs. U.S. EPA reserves the right to disapprove Respondent's contractor at any time during the period that the Order is effective.
4. If U.S. EPA disapproves a contractor, then Respondent must, within thirty (30) days of receipt from U.S. EPA of written notice of disapproval, notify U.S. EPA in writing of the name, title and qualifications of its replacement.

## **X. QUALITY ASSURANCE**

- A. Respondent shall follow U.S. EPA guidance for sampling and analysis. Submittals shall contain quality assurance/quality control (QA/QC) and chain of custody procedures for all sampling, monitoring, and analytical activities.
- B. The names, addresses, and telephone numbers of the analytical laboratories Respondent proposes to use must be specified in the applicable submittals.
- C. All workplans or submittals required under this Order shall include data quality objectives for each data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended uses.
- D. Respondent shall monitor its contractors and their work to ensure that high quality data are obtained. Respondent shall ensure that laboratories it uses perform analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846 Third Edition inclusive of Final updates I, II, IIa, IIb, III, and any subsequent updates), or other methods

deemed satisfactory to U.S. EPA. If methods other than U.S. EPA methods are to be used, Respondent shall specify all such protocols in the applicable submittal.

- E. U.S. EPA may reject any data that does not meet the requirements of the approved workplan or submittal, or U.S. EPA analytical methods, and may require re-sampling and additional analyses.
- F. Respondent shall ensure that laboratories it uses for analyses participate in a QA/QC program equivalent to that which is followed by U.S. EPA.
- G. U.S. EPA may conduct a performance and QA/QC audit of the laboratories chosen by Respondent before, during, or after sample analyses. Upon request by U.S. EPA, Respondent shall have its laboratory perform analyses of samples provided by U.S. EPA to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, re-sampling and additional analyses may be required.

## **XI. SAMPLING AND DATA/DOCUMENT AVAILABILITY**

- A. Respondent shall submit to U.S. EPA, upon request, the results of all sampling and/or tests or other data generated by Respondent or its agents or contractors pursuant to this Order.
- B. Notwithstanding any other provisions of this Order, the United States retains all of its information gathering and inspection authorities, including the authority to bring enforcement actions related thereto, under RCRA, CERCLA, and any other applicable statutes or regulations.
- C. Respondent shall notify U.S. EPA in writing at least fourteen (14) days prior to beginning each separate phase of field work approved under any submittal required by this Order.
- D. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from the U.S. EPA Project Coordinator or, if the U.S. EPA Project Coordinator is unavailable, his or her Section Chief, to commence such activities immediately.

- E. At the request of U.S. EPA, Respondent shall provide or allow U.S. EPA or its authorized representatives to take split or duplicate samples of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, U.S. EPA shall allow Respondent or its authorized representatives to take split or duplicate samples of all samples collected by U.S. EPA under this Order.
- F. Respondent may assert a business confidentiality claim covering all or part of any information submitted to U.S. EPA pursuant to this Order. Any assertion of confidentiality must be accompanied by information that satisfies the items listed in 40 CFR 2.204(e)(4) or such claim shall be deemed waived. Information determined by U.S. EPA to be confidential shall be disclosed only to the extent permitted by 40 CFR Part 2.
- G. If no confidentiality claim accompanies the information when it is submitted to U.S. EPA, the information may be made available to the public by U.S. EPA without further notice to Respondent.



- H. Respondent agrees not to assert any confidentiality claim with regard to any physical or analytical data.

### XII. ACCESS

- A. U.S. EPA, its contractors, employees, and/or any duly designated representatives are authorized to enter and freely move about the Facility as necessary to fulfill the purposes of this Order, including inter alia:
1. Interviewing Facility personnel and contractors;
  2. Inspecting records, operating logs, and contracts related to the Facility;
  3. Reviewing the progress of Respondent in carrying out the terms of this Order;
  4. Conducting such tests, sampling, or monitoring as U.S. EPA deems necessary;
  5. Using a camera, sound recording, or other documentary type equipment; and
  6. Verifying the reports and data submitted to U.S. EPA by Respondent.
- B. Respondent shall provide U.S. EPA and its representatives access at all reasonable times to the Facility and, subject

to paragraph C below, to any other property to which access is required for implementation of this Order. Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or its contractors.

- C. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of the date that the need for access becomes known. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives access to such property, and the payment of reasonable compensation in consideration of granting access. Any such access agreement shall provide for access by U.S. EPA and its representatives. Respondent shall ensure that

U.S. EPA's Project Coordinator has a copy of any access agreements.

- D. In the event that agreements for access are not obtained within thirty (30) days of approval of any workplan or submittal for which access is required, Respondent shall notify U.S. EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements.
- E. U.S. EPA may, in its discretion, assist Respondent in obtaining access. In the event U.S. EPA obtains access, Respondent shall undertake U.S. EPA-approved work on such property.
- F. Respondent agrees to indemnify the United States as provided in Section XXI: Indemnification of the United States Government, for any and all claims arising from activities on such property.
- G. Nothing in this section limits or otherwise affects U.S. EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

- H. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation to perform corrective action, including corrective action beyond the Facility boundary, notwithstanding the lack of access.

### **XIII. RECORD PRESERVATION**

- A. Respondent shall retain, during the pendency of this Order and for a minimum of 6 years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order. Respondent shall notify U.S. EPA in writing ninety (90) days prior to the destruction of any such records, and shall provide U.S. EPA with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

Project Coordinator for Techalloy Company, Inc.  
Enforcement and Compliance Assurance Branch  
Waste, Pesticides and Toxics Division (DE-9J)

U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

- B. Respondent shall, within thirty (30) days of retaining or employing any agent or contractor for the purpose of carrying out the terms of this Order, enter into an agreement with any such agent or contractor whereby such agent or contractor will be required to provide Respondent a copy of all documents produced pursuant to this Order.
- C. All documents pertaining to this Order shall be stored by Respondent in a centralized location at the Facility to afford ease of access by U.S. EPA or its representatives.

#### **XIV. REPORTING AND DOCUMENT CERTIFICATION**

- A. Beginning with the first full month following the effective date of this Order, and throughout the period that this Order is effective, Respondent shall provide U.S. EPA with monthly progress reports. Progress reports are due by the fifteenth day of each month and report the previous month's activities and progress. The progress reports shall conform to requirements in the relevant Scope of Work contained in

Attachment I. U.S. EPA may adjust the frequency of progress reports to be consistent with site-specific activities.

- B. Three (3) copies of all documents submitted pursuant to this Order shall be sent to the U.S. EPA Project Coordinator designated pursuant to Section VII of this Order.

Respondent shall send these documents either by messenger service, certified mail, return receipt requested, or by overnight mail. Other addressees and additional copies (e.g., Illinois EPA) can also be designated by the U.S. EPA Project Coordinator. All documents submitted pursuant to this Order shall be printed on recycled paper and shall be copied double-sided whenever practicable.

- C. Any report or other document submitted by Respondent pursuant to this Order which makes any representation concerning Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of Respondent or a duly authorized representative. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business

function, or any other person who performs similar policy or decision-making functions for the corporation.

- D. The certification required by paragraph C above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **XV. DELAY IN PERFORMANCE/STIPULATED PENALTIES**

A. Unless there has been a written modification by U.S. EPA of a compliance date, an approved workplan condition, or excusable delay as defined in Section XVII: Force Majeure and Excusable Delay, if Respondent fails to comply with any term or condition set forth in this Order in the time or manner specified herein, Respondent shall pay stipulated penalties as set forth below upon written demand from U.S. EPA:

1. For failure to commence, perform, or complete any work required by an U.S. EPA-approved workplan in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$4,000 per day for each day of such violation thereafter;
2. For failure to complete or submit any workplans or reports (other than progress reports) in a manner acceptable to U.S. EPA or at the time required pursuant to this Order, or for failure to notify U.S. EPA of immediate or potential threats to human health and/or



the environment, new releases of hazardous waste and/or new solid waste management units not previously identified, as required by this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$4,000 per day for each day of such violation thereafter;

3. For failure to complete or submit other work not included in paragraph A.1 and A.2. of this section in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$750 per day for the first seven days of such violation, \$1,500 per day for the eighth through twenty-first day of such violation, and \$2,500 per day for each day of such violation thereafter;
4. For failure to comply with any other provisions of this Order in a manner acceptable to U.S. EPA: \$750 per day for the first seven days of such violation, \$1,500 per day for the eighth through twenty-first day of such violation, and \$2,500 per day for each day of such violation thereafter.

- B. Penalties shall begin to accrue on the day after complete performance is due or on the day a violation occurs, and shall continue to accrue through the day of correction of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue to accrue regardless of whether U.S. EPA has notified Respondent of a violation.
- C. All penalties owed to the United States under this section shall be due and payable within thirty (30) days of the Respondent's receipt from U.S. EPA of a written demand for payment of the penalties. Such a written demand will describe the violation and will indicate the amount of penalties due.
- D. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31) day after Respondent's receipt of U.S. EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. § 3717, an additional penalty of 6% per annum on any unpaid

principal shall be assessed for any stipulated penalty payment which is overdue for 90 or more days.

- E. All penalties shall be made payable by certified or cashier's check to the United States of America and shall be remitted to:

U.S. Department of Treasury  
Attention: U.S. EPA, Region 5  
Office of the Comptroller  
P.O. Box 70753  
Pittsburgh, PA 15251

- F. All such checks shall reference the name of the Facility, the Respondent's name and address, and the U.S. EPA docket number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to U.S. EPA's Project Coordinator and assigned attorney.
- G. Respondent may dispute U.S. EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XVI: Dispute Resolution. The stipulated penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or

agreement. Respondent shall submit such payment to U.S. EPA within seven (7) days of receipt of such resolution in accordance with paragraph E of this section.

H. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondent's obligation to comply with the terms and conditions of this Order.

I. The stipulated penalties set forth in this section do not preclude U.S. EPA from pursuing any other remedies or sanctions which may be available to U.S. EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order including, but not limited to, seeking statutory penalties for such violations.

J. No payments under this section shall be tax deductible for Federal tax purposes.

#### **XVI. DISPUTE RESOLUTION**

A. The parties shall use their best efforts to resolve informally and in good faith all disputes or differences of opinion. The parties agree that the procedures contained in this section are the sole procedures for resolving disputes

arising under this Order. If Respondent fails to follow any of the requirements contained in this section then it shall have waived its right to further consideration of the disputed issue.

- B. If Respondent disagrees, in whole or in part, with any written decision (Initial Written Decision) by U.S. EPA pursuant to this Order, Respondent's Project Coordinator shall notify the U.S. EPA Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.
- C. If the Project Coordinators cannot resolve the dispute informally, Respondent may pursue the matter formally by placing its objections in writing. Respondent's written objections must be directed to the supervisor of U.S. EPA's Project Coordinator and copied to U.S. EPA's Assistant Regional Counsel. This written notice must be mailed to such persons within fourteen (14) days of Respondent's receipt of the Initial Written Decision. Respondent's written objection must set forth the specific points of the dispute, the position Respondent claims should be adopted as consistent with the requirements of this Order, the basis

for Respondent's position, and any matters which it considers necessary for U.S. EPA's determination.

- D. U.S. EPA and Respondent shall have fourteen (14) days from U.S. EPA's receipt of Respondent's written objections to attempt to resolve the dispute through negotiations. This time period may be extended by U.S. EPA for good cause. During such time period (Negotiation Period), Respondent may request a conference with Chief of the Enforcement Compliance Assurance Branch to discuss the dispute and Respondent's objections. U.S. EPA agrees to confer in person or by telephone to resolve any such disagreement with Respondent as long as Respondent's request for a conference will not extend the Negotiation Period.
- E. Any agreement to resolve the dispute reached by the parties pursuant to this section shall be in writing and shall be signed by both parties. The written agreement shall be an enforceable element of this Order.
- F. If the parties are unable to reach an agreement within the Negotiation Period Respondent may submit, within ten (10) days of the end of the Negotiation Period, any additional

written arguments and evidence not submitted in its previous written objections, to the Director of the Waste, Pesticides and Toxics Division (WPTD). The Chief of the Enforcement Compliance Assurance Branch shall respond in writing to the Director of the WPTD. Based on the record, the Director of the WPTD shall provide to Respondent U.S. EPA's written decision on the dispute and the basis for that decision (Dispute Decision). The Dispute Decision shall be incorporated into and become an enforceable element of this Order, but will not be considered final Agency action for purposes of judicial review.

- G. Except as provided in Section XV: Delay in Performance/Stipulated Penalties, the existence of a dispute as defined in this section and U.S. EPA's consideration of matters placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order during the pendency of the dispute resolution process.

#### **XVII. FORCE MAJEURE AND EXCUSABLE DELAY**

- A. Force majeure, for purposes of this Order, is defined as any event arising from causes not foreseen and beyond the

control of Respondent or any person or entity controlled by Respondent, including but not limited to Respondent's contractors, that delays or prevents the timely performance of any obligation under this Order despite Respondent's best efforts to fulfill such obligation. The requirement that Respondent exercise "best efforts to fulfill such obligation" shall include, but not be limited to, best efforts to anticipate any potential force majeure event and address it before, during, and after its occurrence, such that any delay or prevention of performance is minimized to the greatest extent possible.

- B. Force majeure does not include increased costs of work to be performed under this Order, financial inability to complete the work, plant shutdown, work stoppages or other labor disputes.
- C. If any event occurs or has occurred that may delay the performance of an obligation under this Order, whether or not caused by a force majeure event, Respondent shall provide written notice to U.S. EPA's Project Coordinator or, in their absence, his or her supervisor within 48 hours of when Respondent first knew or should have known that the



event might cause a delay. If Respondent wishes to claim a force majeure event, then within five (5) days of the event Respondent shall provide to U.S. EPA in writing detailed information regarding:

1. The events or causes giving rise to the claim;
2. The work that is subject to the event and the anticipated duration of the delay;
3. All actions Respondent has taken and will take to prevent or minimize the delay;
4. All other obligations affected by the event, and what measures, if any, Respondent has taken and will take to minimize the effect of the event on those obligations;
5. A schedule for implementation of all measures Respondent will take to prevent or mitigate the delay or the effect of the delay;
6. Respondent's rationale for attributing such delay to a force majeure event if it intends to assert such a claim;
7. A statement as to whether, in the opinion of Respondent, such event may cause or contribute to endangerment to public health or the environment; and

8. A description of its best efforts to fulfill its obligations under the Order and to minimize the duration of any delay.
- D. Respondent shall include with any claim of force majeure all available documentation supporting its claim, if any, that the delay was attributable to a force majeure event. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.
- E. If U.S. EPA determines that the delay or anticipated delay is attributable to a force majeure event, the time for performance of such obligation under this Order that is affected by the force majeure event will be extended by U.S. EPA for such time as U.S. EPA determines is necessary to perform such obligation. U.S. EPA will notify Respondent in writing of the length of the extension, if any.
- F. An extension of the time for performance of such obligation affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation,

unless Respondent can demonstrate that more than one obligation was affected by the force majeure event.

- G. If U.S. EPA disagrees with Respondent's assertion of a force majeure event, U.S. EPA will notify Respondent in writing and Respondent may elect to invoke the dispute resolution provision, and shall follow the time frames set forth in Section XVI: Dispute Resolution. In any such proceeding Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or the anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of this section. If Respondent satisfies this burden, the time for performance of such obligation will be extended by U.S. EPA for such time as is necessary to complete such obligation.

### XVIII. RESERVATION OF RIGHTS

- A. U.S. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to this Facility, the work required by this Order, or Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which U.S. EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
- B. U.S. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order and to order that Respondent perform the work required or additional tasks.
- C. U.S. EPA reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the

environment. U.S. EPA may exercise its authority under CERCLA to undertake response actions at any time. In any event, U.S. EPA reserves its right to seek reimbursement from Respondent for costs incurred by the United States. Notwithstanding compliance with the terms of this Order, Respondent is not released from liability, if any, for the costs of any response actions taken or authorized by U.S. EPA in accordance with the requirements of this paragraph.

- D. If U.S. EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, U.S. EPA may order Respondent to stop further implementation of this Order for such period of time as U.S. EPA determines may be needed to abate any such release or threat and/or to undertake any action which U.S. EPA determines is necessary to abate such release or threat.
- E. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that U.S. EPA's approval of a Scope of Work or any final

workplan does not constitute a warranty or representation that the Scope of Work or workplan will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.

F. Notwithstanding any other provision of this Order, no action or decision by U.S. EPA pursuant to this Order, including without limitation decisions of the Regional Administrator, the Director of the Waste, Pesticides and Toxics Division or any authorized representative of U.S. EPA, shall constitute final Agency action giving rise to any right of judicial review prior to U.S. EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.

G. In any action brought by U.S. EPA for a violation of this Order, Respondent shall bear the burden of proving that U.S. EPA's actions were arbitrary and capricious and not in accordance with law.

H. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter. Respondent also shall not contest U.S. EPA's jurisdiction to issue or enforce this Order and shall not contest the terms of this Order. Respondent reserves its right to raise all other defenses, factual, legal, and equitable, in any action brought to enforce the provisions of this Order or in any other action relating to the Facility. Respondent has entered in to this Order in good faith without trial or adjudication of any issue of fact or law.

#### **XIX. OTHER CLAIMS**

A. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense in law or equity against any person, firm, partnership, or

corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or migrating from, the Facility.

- B. Respondent waives any claims or demands for compensation or payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund established by 26 U.S.C. § 9507 for, or arising out of, any activity performed or expense incurred pursuant to this Order. Additionally, this Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

#### **XX. OTHER APPLICABLE LAWS**

All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations. Respondent shall



obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

**XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT**

- A. Except as provided below, Respondent agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees (collectively, the United States) from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. Respondent shall not be required to indemnify the United States where its agencies, departments, agents or employees are contributorily negligent or guilty of other wrongful acts or omissions.
- B. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

## **XXII. FINANCIAL RESPONSIBILITY**

- A. Respondent shall provide financial assurance in the amount of three million dollars (\$3,000,000.00) for the implementation of corrective measures within ninety (90) days of the effective date of this Order. Respondent shall establish the financial assurance from among one or more of the following:
1. A trust fund;
  2. A surety bond;
  3. A letter of credit;
  4. Insurance; or
  5. A financial test and corporate guarantee.
- B. The wording and terms of the financial assurance instrument(s) shall be subject to approval by the U.S. EPA.

## **XXIII. MODIFICATION**

- A. This Order may only be modified by mutual agreement of U.S. EPA and Respondent. Any agreed modification shall be in writing and signed by both parties, shall have as its effective date the date on which it is signed by U.S. EPA, and shall be incorporated into this Order.

- B. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by U.S. EPA, incorporated into this Order.
- C. Unless there is an approved modification as provided in paragraph D of this section, any noncompliance with such U.S. EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order and shall subject Respondent to the penalty provisions of Section XV: Delay in Performance/Stipulated Penalties.
- D. Any request by Respondent for a compliance date modification and/or revision of an approved workplan requirement must be made in writing and be received by U.S. EPA at least ten (10) days prior to an applicable deadline. Such requests must provide justification for any proposed compliance date modification or workplan revision. U.S. EPA has no obligation to approve such requests, but if it does so, such approval and the modification or revision must be in writing from U.S. EPA's Project Coordinator.
- E. Any approved compliance date modification shall be incorporated by reference into this Order. Such a

modification would not alter other due dates, unless so stated by U.S. EPA in its written approval, modification, or revision.

- F. No informal advice, guidance, suggestions or comments by U.S. EPA regarding reports, plans, specifications, schedules or any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

#### **XXIV. SEVERABILITY**

If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

#### **XXV. SURVIVABILITY/PERMIT INTEGRATION**

- A. Except as otherwise expressly provided in this section, this Order shall survive the issuance or denial of a RCRA permit for the Facility, and this Order shall continue in full

force and effect after either the issuance or denial of such permit. Accordingly, Respondent shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit.

- B. If Respondent is issued a RCRA permit for this Facility that expressly incorporates all or part of the requirements of this Order, or expressly states that its requirements are intended to replace some or all of the requirements of this Order, Respondent may request a modification of this Order and shall, with written U.S. EPA approval, be relieved of liability under this Order for those specific obligations.

#### **XXVI. TERMINATION AND SATISFACTION**

- A. The provisions of this Order shall be deemed satisfied upon Respondent's and U.S. EPA's execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" (Acknowledgment). U.S. EPA will prepare the Acknowledgment for Respondent's signature when U.S. EPA has determined that Respondent has demonstrated to the satisfaction of U.S. EPA that the terms of this Order, including any additional tasks determined by U.S. EPA to be

required pursuant to this Order, have been satisfactorily completed and any penalties have been paid. Respondent's execution of the Acknowledgment will affirm that Respondent has certain continuing obligations as identified by U.S. EPA. These continuing obligations include:

1. Preserving all records as required in Section XIII:  
Record Preservation;
2. Recognizing U.S. EPA's reservation of rights as required in Section XVIII: Reservation of Rights, after all other requirements of this Order are satisfied; and
3. Maintaining long-term corrective measures until such time as U.S. EPA terminates Respondent's duty for these activities.

B. The Acknowledgment required by this section shall be consistent with Attachment II: Acknowledgment of Termination.

#### **XXVII. EFFECTIVE DATE**

The effective date of this Order shall be the date on which it is signed by U.S. EPA. Because the Order was entered with the consent of both parties, Respondent waives its right to request a

public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C.  
§ 6928(b).

IT IS SO AGREED:

BY: Philippe L. Maitrepierre  
Techalloy Company, Inc.  
President & Chief Executive Officer

September 30, 1999  
Date

IT BEING SO AGREED, IT IS HEREBY ORDERED THIS 30<sup>th</sup> DAY OF

September, 1999.

BY: Joseph M. Boyle

Joseph M. Boyle, Chief  
Enforcement & Compliance Assurance Branch  
Waste, Pesticides and Toxics Division  
U.S. EPA, Region 5

U.S. EPA I.D.# ILD 005 178 975

R8H-5-99-008

EXHIBIT A

RESIDENTIAL WELLS USED FOR DRINKING WATER

Non-responsive

Non-responsive

Non-responsive

Non-responsive

Non-responsive



EXHIBIT B

RESIDENTIAL WELL - HIGHBRIDGE ROAD

**Non-responsive**

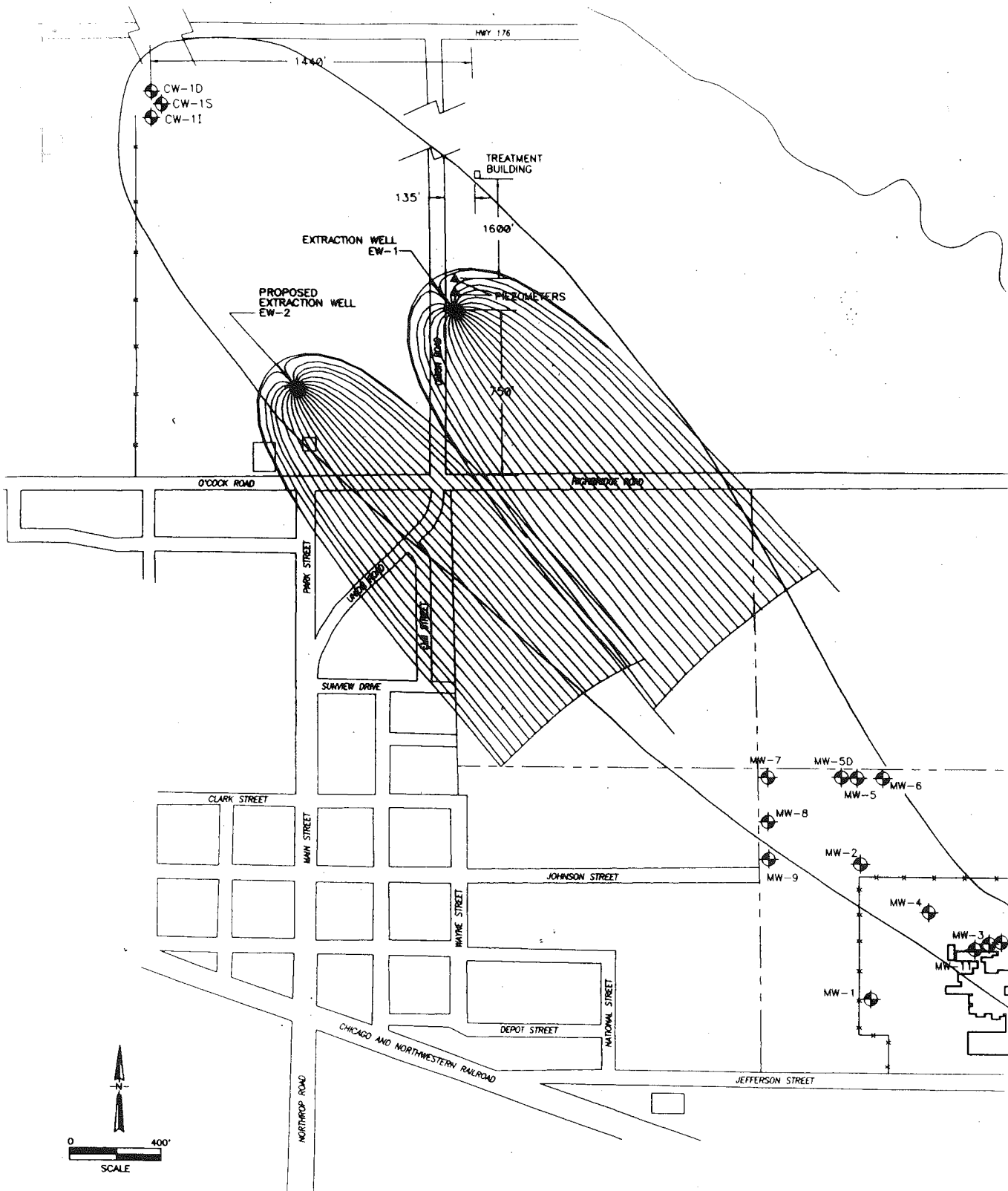


EXHIBIT C GROUNDWATER  
RECOVERY CAPTURE ZONE

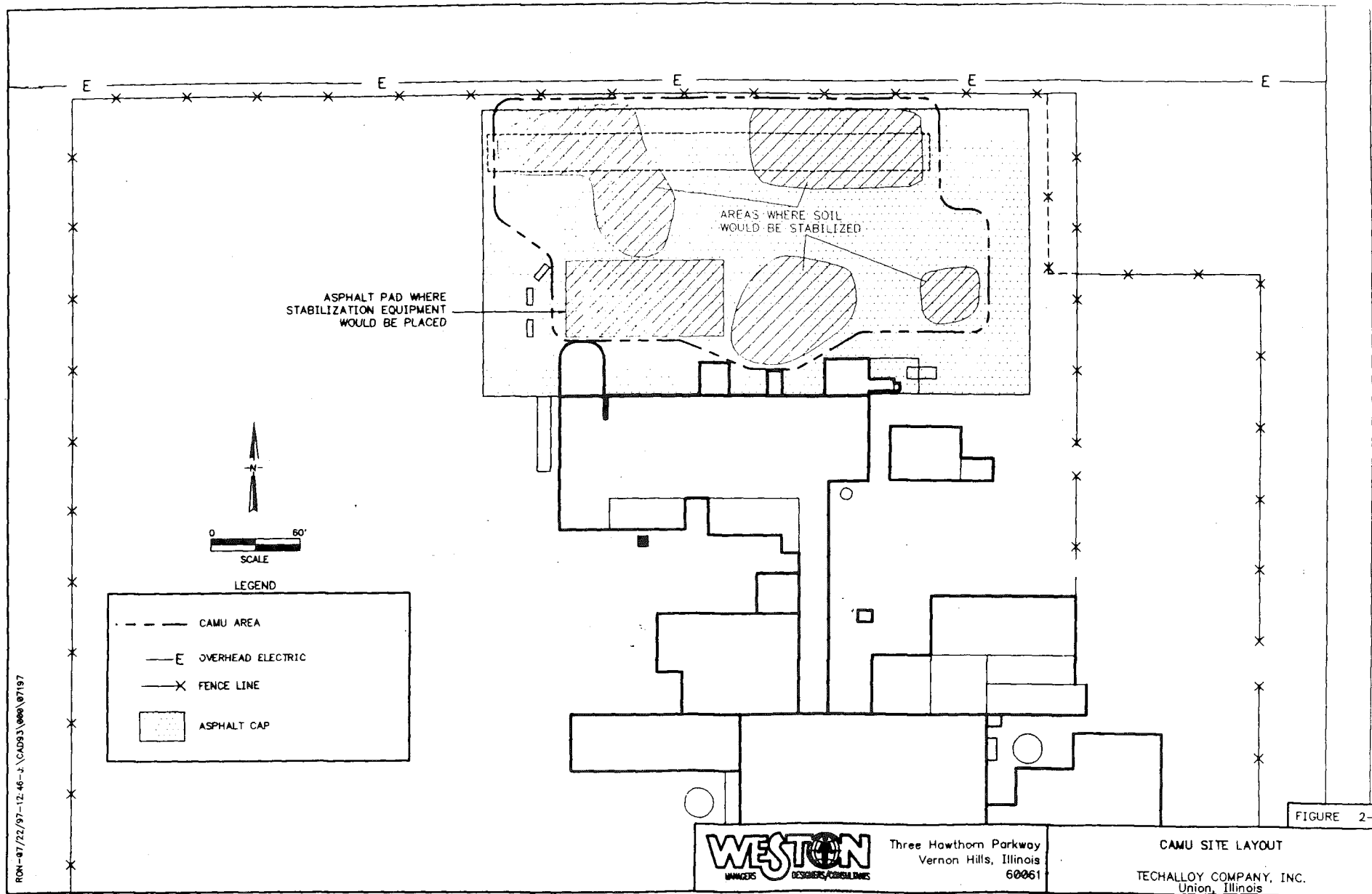


EXHIBIT D

**ATTACHMENT I**

CORRECTIVE MEASURES IMPLEMENTATION PROGRAM  
TECHALLOY COMPANY, INC.

SCOPE OF WORK

## ATTACHMENT I

### CORRECTIVE MEASURES IMPLEMENTATION PROGRAM TECHALLOY COMPANY, INC

#### SCOPE OF WORK

##### PURPOSE

This Scope of Work (SOW) sets forth the requirements for the implementation of the design, construction/installation, operation, maintenance and monitoring of the Corrective Measures selected by U.S. EPA in the May 26, 1998, RCRA Final Decision for the Techalloy Company, Inc., Facility in Union, Illinois.

##### DESCRIPTION OF THE CORRECTIVE MEASURES

The major components of the corrective measures are:

- Institutional controls
- Continuance of private well sampling program
- Continued operation of a groundwater recovery system with upgrade
- Soil stabilization to address soils contaminated with metals
- Focused air sparge/soil vapor extraction system
- Groundwater monitoring

Respondent shall design and implement the corrective measures to fulfill the requirements of the Consent Order and meet the performance standards set forth in an approved Final Design.

##### SCOPE

- TASK I      Connection to City Water System and Private Well Sampling
- TASK II     Perform Soil Stabilization Treatment
- TASK III    Implement Corrective Measures Final Design

## TASK I Connection to City Water System and Private Well Sampling

- A. Pursuant to Section VIII.D.1. and VIII.D.3. of the Consent Order, Respondent shall provide residential wells with connection to the city water system of Union, Illinois, and shall provide for proper abandonment of residential wells that are so connected.
- B. Pursuant to VIII.D.2. of the Consent Order, Respondent shall perform quarterly sampling and analysis of private wells.

## TASK II Perform Soil Stabilization Treatment

Pursuant to Section VIII.F. of the Consent Order, Respondent shall perform soil stabilization treatment and shall address the following elements:

- A. Implement bench scale studies
  - 1. Develop baseline characterization
    - a. Physical soil tests
      - (1) permeability
      - (2) unconfined compressive strength
      - (3) bulk density
      - (4) grain size
      - (5) Atterberg limits
      - (6) specific gravity
      - (7) soil classification
    - b. Chemical soil testing
      - (1) volatile organic compounds
      - (2) Toxic Characteristic Leaching Procedure (TCLP) chromium, nickel, lead, and arsenic

(To maximize testing, tests shall be performed on most highly contaminated soils)
  - 2. Preliminary study
    - a. Testing of admixture formulations
      - (1) permeability
      - (2) unconfined compressive strength
      - (3) (TCLP) analysis EPA SW 1300 chromium, nickel, lead, and arsenic

3. Select admixture formulation
- B. Implement soil stabilization treatment
1. Install asphalt pad for equipment/soil staging which meets following specifications:
    - a. 2-3% slope
    - b. 4 inch perimeter berm
  2. Excavate soils at designated areas - Exhibit D (to just above water table)
    - a. Perform verification sampling/analysis at perimeter of areas designated for excavation and treatment
      - (1) Collect a minimum of 5 shallow (1-3 foot depth range) soil samples at each area
        - (a) analyze for chromium, nickel, lead and arsenic content
    - b. Expand excavation at areas where metal content in perimeter samples exceeds:
      - (1) 1960 mg/kg chromium
      - (2) 2665 mg/kg nickel
      - (3) 1500 mg/kg lead
      - (4) 240 mg/kg arsenic
  3. Soil stabilization treatment
    - a. Apply selected admixture formulation to excavated soils
  4. Verification sampling  
Perform verification analysis of soil for each 400 cubic yard treatment batch:
    - a. TCLP analysis - pre-treatment/post-treatment chromium, nickel, lead, and arsenic
    - b. Unconfined compressive strength
    - c. Permeability
  5. Performance standards  
Treated soils shall meet the following performance standards:
    - a. 95% reduction of chromium, nickel, lead, and

- arsenic as established by pre-treatment/  
post-treatment TCLP analysis
- b. Permeability  
1 X 10<sup>-6</sup> cm/sec or less
- c. Unconfined compressive strength  
20 psi/2 day cure  
50 psi/28 day cure
- 6. Return treated soils meeting performance standards to  
excavations or Spent Acid Holding Pond
  - a. 12 inch lifts
  - b. Compact soil - 90% maximum
- C. Asphalt cap installation
  - 1. Install asphalt cap as depicted in Exhibit D  
The asphalt cap shall meet the following specifications:
    - a. 2 inch gravel subgrade
      - lower 2.5 inches asphalt - IDOT Class I Type 2
      - upper 2.5 inches asphalt - IDOT Class I Type 3
    - b. 2-3 % slope
- D. Complete closure of CAMU and perform post-closure care for  
CAMU pursuant to 40 CFR 264.552(e) (4)
  - 1. At a minimum, closure shall include:
    - a. Decontamination of equipment
    - b. Off-site disposal of decontamination residuals
  - 2. At a minimum, post-closure care shall include:
    - a. Inspection of asphalt cap
    - b. Groundwater monitoring
    - c. Recordkeeping
    - d. Implementation of Contingency Plan as appropriate

### TASK III Implement Corrective Measures Final Design

Draft and Final Designs for implementation of corrective measures shall be submitted in accordance with Section VIII of the Consent Order, and shall address the following elements:



A. Air Sparge/Soil Vapor Extraction (AS/SVE) specifications

1. Collect pre-design data as needed and perform pilot study and preliminary testing
2. Results of all testing and analysis of pre-design investigation (tables, laboratory reports, illustrations, discussion of results)
3. Location and construction details for
  - a. Sparge wells
  - b. SVE wells
  - c. Monitoring wells for AS/SVE system
  - d. Schematic for vapor treatment system
  - e. Performance standards

B. Groundwater Recovery System Operation

1. Performance standards
2. Monitoring of system
  - a. Water level measurements
  - b. Sampling and analysis
    - (1) influent water
    - (2) effluent water

C. Groundwater Monitoring Specifications

1. General monitoring program
  - a. Monitoring well locations
  - b. Analytes
  - c. Sampling schedule
2. CAMU post-closure monitoring
  - a. Monitoring well sampling

At a minimum, monitoring well sampling shall include:

    - (1) one initial sampling - OBS-W
    - (2) annual sampling - MW-2, MW-5, MW-5D, MW-6, MW-7, MW-8
    - (3) analytes - chromium, nickel, and lead

- b. Contingency Plan
  - (1) statistical analysis
  - (2) response sampling

D. Site Maintenance

- 1. Asphalt cap
  - a. Inspection schedule
  - b. Maintenance procedures
- 2. Chain link fence
  - a. Inspection schedule
  - b. Maintenance procedures

QUALITY ASSURANCE/QUALITY CONTROL

All data shall be collected and analyzed in accordance with the approved Quality Assurance Project Plan dated March 1994 or, as applicable, the latest U.S. EPA-approved test method. ASTM standardized tests or U.S. EPA-approved test methods shall be used for physical soil testing. Chemical analysis shall be performed by the same laboratories used for the RCRA Facility Investigation.

HEALTH AND SAFETY PLAN

All work shall be performed in accordance with the approved Health and Safety Plan, supplemented as needed.

**ATTACHMENT II**

**Acknowledgment of Termination**

**ATTACHMENT II**  
**Acknowledgment of Termination**

ACKNOWLEDGMENT OF TERMINATION AND  
AGREEMENT TO RECORD PRESERVATION AND RESERVATION OF RIGHTS

1. The United States Environmental Protection Agency (U.S. EPA) agrees and acknowledges that the terms of the Administrative Order for Corrective Measures Implementation issued by U.S. EPA on \_\_\_\_\_, 1999, U.S. EPA Docket No. R8H-5-99-008, (Order) including any additional tasks determined by U.S. EPA to have been required pursuant to the Order, but excluding Section XIII: Record Preservation, have been satisfactorily completed based upon the information presently available to U.S. EPA.
2. Respondent agrees and acknowledges that the terms of Section XIII: Record Preservation remain in effect until \_\_\_\_\_, 20\_\_\_\_ (date 6 years after termination of the Order).
3. Respondent agrees and acknowledges that Respondent's completion of the terms of the Order does not limit or otherwise preclude U.S. EPA from taking additional enforcement action pursuant to Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h), or other available legal authorities, should U.S. EPA determine that such actions are warranted.
4. Respondent agrees and acknowledges that Respondent's completion of the terms of the Order does not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.

IT IS SO AGREED AND ACKNOWLEDGED:

Date: \_\_\_\_\_ By: \_\_\_\_\_  
(Name), (Title)  
TECHALLOY COMPANY, INC.

Date: \_\_\_\_\_ By: \_\_\_\_\_  
(Name), (Title)  
UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY  
REGION 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:

TECHALLOY COMPANY, INC.

6509 OLSON ROAD

UNION, ILLINOIS 60180

US EPA ID NO. ILD 005 178 975

RESPONDENT.

ADMINISTRATIVE ORDER ON CONSENT

FOR CORRECTIVE MEASURES  
IMPLEMENTATION

U.S. EPA Docket No.

Proceeding under Section  
3008(h) of the Resource  
Conservation and Recovery Act,  
as amended, 42 U.S.C. §6928(h).

**I. JURISDICTION**

- A. This ADMINISTRATIVE ORDER ON CONSENT (Order) for Corrective Measures Implementation is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority vested in the Administrator to issue this Order has been delegated to the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides and Toxics Division, Region 5, U.S. EPA.

writing of the Project Coordinator it has selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in their absence. U.S. EPA's Project Coordinator will be U.S. EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and U.S. EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.

- B. Respondent may change its Project Coordinator but agrees to provide at least fourteen (14) days written notice prior to changing its Project Coordinator. Respondent shall notify U.S. EPA within five (5) days of any anticipated change in its Project Coordinator.
- C. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

#### **VIII. WORK TO BE PERFORMED**

- A. Pursuant to §3008(h) of RCRA, Respondent agrees to and is hereby ordered to perform the acts specified in this

section, in the manner and by the dates specified herein. All work and/or submittals required by this Order are subject to U.S. EPA approval in accordance with Section IX: Agency Approvals/Proposed Contractor. All work undertaken pursuant to this Order shall be performed in a manner consistent with, at a minimum: the attached Scope of Work; all U.S. EPA-approved workplans or submittals; RCRA and other applicable Federal laws and their implementing regulations; and applicable U.S. EPA guidance documents.

- B. Respondent specifically and expressly agrees to timely and adequately apply for any and all permits or authorizations required for work conducted pursuant to this Order. Delays in obtaining any required approval or permit from U.S. EPA or other entities that result despite Respondent's complete, timely and appropriate submission of all information and documentation required for approval, including applications for permits, within a time frame that would allow the work to proceed in a manner contemplated by the schedule in the Order, Final Design, and/or workplans, are subject to Section XVII: Force Majeure and Excusable Delay.

C. All work undertaken pursuant to this Order shall include and be performed in a manner consistent with, at a minimum: the Scope of Work for the Corrective Measures Implementation (CMI) Program set forth in the Attachment I; the approved Final Design, any workplans, and other submittals including plans and schedules for additional work required pursuant to paragraph Q of this Section; the Quality Assurance Project Plan; the Health and Safety Plan; and applicable U.S. EPA guidance documents.

D. Private Wells

1. Within thirty (30) days of the effective date of this Order, Respondent shall make an offer in writing to each of the property owners identified in Exhibit A to provide the property with connection to the city water supply system of Union, Illinois. If a property owner accepts such offer, within one hundred and eighty (180) days of receiving that owner's acceptance in writing, Respondent shall provide for connection to the city water supply system and, if the owner permits, also shall arrange for the abandonment of the well at



the property. The wells shall be abandoned and closed pursuant to local and State regulations.

2. For any property identified in Exhibit A as to which the owner refuses connection to the city water supply system, and also for the property identified in Exhibit B, Respondent shall perform quarterly sampling and analysis of the private wells in accordance with the Private Well Sampling Plan (PWSP) dated May 1993. Respondent shall provide the sampling results to the property owners and to U.S. EPA, within fifteen (15) days of receipt of the sampling results. Quarterly sampling of the private wells shall continue until U.S. EPA notifies Respondent in writing that sampling and analysis of some or all of the wells is no longer required, or that the sampling schedule has been revised. If U.S. EPA determines that additional private wells in or near the City of Union require sampling pursuant to the PWSP, U.S. EPA will notify Respondent of this determination and specify the sampling schedule for those additional wells.
3. If in the future a property owner identified in Exhibit A who previously refused connection to the city water

supply advises Respondent or U.S. EPA that he or she wishes to be connected to the municipal water supply, within one hundred and eighty (180) days of such notification Respondent shall provide that property with connection to the city water supply system, and if the property owner consents, also provide for the proper abandonment of the well on that property.

- E. Respondent shall upgrade the Groundwater Recovery System by installing an additional recovery well and increasing the capacity of the water treatment system. The upgraded system shall be fully operational within one hundred and forty (140) days of approval of all necessary permits. Within fifteen (15) days of the system becoming fully operational, Respondent shall notify U.S. EPA in writing that the system has become fully operational. After the new recovery well is fully developed an aquifer test shall be performed on the well and evaluated in accordance with published procedures. Within sixty (60) days of the Groundwater Recovery System becoming fully operational, Respondent shall submit a report to U.S. EPA which provides an as-built well design and specifications/development procedures, and the results of

the aquifer test. At a minimum, the upgraded Groundwater Recovery System shall create the capture zone as depicted in Exhibit C of this Order. The upgraded Groundwater Recovery System shall remain operational until the performance standards as specified in the approved Final Design are achieved. The performance standards shall be protective of human health and the environment.

F. Soil Stabilization

1. Respondent shall implement soil stabilization treatment at the Facility in accordance with Task III of Attachment I. Pursuant to 40 CFR 264.552, the general area to undergo soil stabilization is designated a Corrective Action Management Unit (CAMU), or its regulatory equivalent should relevant RCRA rule changes occur. If the effective date of this Order pre-dates a June 15 date, the soil stabilization shall be completed within one-hundred and fifty (150) days of the effective date of this Order. If the effective date of this Order post-dates a June 15 date, the soil stabilization shall be completed by September 15 of the following year. During the bench-scale studies,

Respondent shall submit to U.S. EPA biweekly reports which summarize the activities and include all test data developed during the reporting period. The soil stabilization treatment shall achieve the performance standard given at ~~B.3.eB.5~~ of Task III, Attachment I, unless U.S. EPA approves in writing alternate performance standards. Soils that do not meet the treatment performance standards shall be disposed off-site pursuant to applicable State and Federal regulations. Proper dust control procedures shall be employed throughout implementation of the soil stabilization treatment. Within forty-five (45) days of completion of the soil stabilization treatment, Respondent shall provide to U.S. EPA a report which documents the completion of the soil stabilization treatment.

2. Respondent shall install the asphalt cap for the soil stabilized area (the CAMU) in accordance with Task III of Attachment I. If the soil stabilization treatment is completed before a September 15 date, the asphalt cap installation shall be completed within sixty (60) days of completion of the soil stabilization. If the

soil stabilization is completed after a September 15 date, the asphalt cap installation shall be completed by June 15 of the following year. Respondent shall notify U.S. EPA of completion of the asphalt cap installation within fifteen (15) days of such completion.

3. Pursuant to 40 CFR 264.552(e)(4), and in accordance with Task III and Task IV of Attachment I, Respondent shall complete closure for the CAMU and perform post-closure care for the CAMU.

G. Upon completion of the asphalt cap installation, Respondent shall revise the December 17, 1997, Facility deed restriction to require proper maintenance of the asphalt cap and the chain link fence at the Facility. The revised deed shall be recorded within sixty (60) days of completion of the asphalt cap installation.

H. Respondent shall collect additional field data as needed, and perform a pilot study and preliminary testing as needed to support a design for the air sparge/soil vapor extraction (AS/SVE) system. Within one hundred and twenty (120) days of completion of the asphalt pad installation, Respondent

shall submit to U.S. EPA a Draft Final Design for corrective measures which includes the elements of Task IV of Attachment I.

- I. Within forty-five (45) days of receipt of U.S. EPA's comments on the Draft Final Design, Respondent shall submit a revised Final Design that fully addresses U.S. EPA's comments.
- J. Within one-hundred and twenty (120) days of approval of the Final Design by U.S. EPA, the AS/SVE system shall be fully operational and shall continue to operate until the performance standards are obtained as specified in the approved Final Design. The performance standards shall be protective of human health and the environment.
- K. Respondent shall perform sampling and analysis of monitoring wells in accordance with the specifications provided in an approved Final Design.
- L. Pursuant to Illinois Administrative Code 725 Subpart G, Respondent shall complete RCRA closure of the hazardous waste management units: (1) acid treatment unit; (2) acid pits; and (3) copper cyanide destruction tanker unit.

M. Respondent acknowledges and agrees that nothing in this Order constitutes a warranty or representation of any kind by U.S. EPA that compliance with the work requirements set forth in the Final Design or Scope of Work of Attachment I will achieve the performance standards. Respondent's compliance with the work requirements shall not foreclose U.S. EPA from seeking compliance with all terms and conditions of this Order, including, but not limited to, achievement of the applicable performance standards.

N. If U.S. EPA concludes that the work or any portion thereof has not been completed in accordance with this Order, U.S. EPA will notify Respondent in writing of the activities necessary to complete the work. Within thirty (30) days of such notice, Respondent shall submit a schedule for the performance of such activities to U.S. EPA for approval. Respondent shall perform all activities described in the notice in accordance with the U.S. EPA-approved specifications and schedules established therein.

O. If Respondent concludes that the performance standards specified in the approved Final Design have been attained to the degree that the operation of the AS/SVE System and/or

the Groundwater Recovery System may be modified as prescribed in the Final Design, prior to any operational modification Respondent shall provide forty-five (45) days advance notification of such modification in writing to U.S. EPA. Sufficient data to support the operational modification shall be provided with the notification.

P. Interim Measures

1. In the event Respondent identifies an immediate or potential threat to human health and/or the environment, discovers new releases or potential releases of hazardous waste or hazardous constituents at or from the Facility, or discovers new solid waste management units not previously identified, Respondent shall notify the U.S. EPA Project Coordinator orally within forty-eight (48) hours of discovery and notify U.S. EPA in writing within seven (7) days of such discovery. The written notification shall summarize the immediacy and magnitude of the potential or actual threat(s) posed to human health or the environment. Upon written request by U.S. EPA, Respondent shall submit to U.S. EPA an Interim Measures (IM) Workplan



and implementation schedule in accordance with a schedule and Scope of Work established by U.S. EPA. If U.S. EPA determines that immediate action is required, the U.S. EPA Project Coordinator may orally authorize Respondent to act prior to U.S. EPA's receipt and/or approval of the IM Workplan. Respondent shall implement the IM Workplan as approved by U.S. EPA.

2. If U.S. EPA identifies an immediate or potential threat to human health or the environment, discovers new releases of hazardous waste or hazardous constituents, or discovers new solid waste management units not previously identified, U.S. EPA will notify Respondent in writing. Within thirty (30) days of receiving U.S. EPA's written notification, Respondent shall submit to U.S. EPA an IM Workplan in accordance with the schedule and IM Scope of Work established by U.S. EPA. The IM Workplan shall identify interim measures which will mitigate the threat. If U.S. EPA determines that immediate action is required, the U.S. EPA Project Coordinator may orally require Respondent to act prior to Respondent's receipt of U.S. EPA's written

such determination, Respondent shall have the opportunity to meet or confer with U.S. EPA to discuss the additional work.

3. If required by U.S. EPA, Respondent shall submit for U.S. EPA approval a workplan for the additional work. U.S. EPA shall specify the contents of such workplan. Such workplan shall be submitted within sixty (60) days of receipt of U.S. EPA's determination that additional work is necessary, or according to an alternative schedule by U.S. EPA.
4. Upon approval of a workplan by U.S. EPA, Respondent shall implement it in accordance with the schedule and provisions contained therein.

#### **IX. AGENCY APPROVALS/PROPOSED CONTRACTOR**

##### **A. Agency Approvals**

1. U.S. EPA will provide Respondent with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments for any workplan, report (except progress reports), specification, or schedule submitted pursuant

## **XII. ACCESS**

- A. U.S. EPA, its contractors, employees, and/or any duly designated representatives are authorized to enter and freely move about the Facility as necessary to fulfill the purposes of this Order, including, inter alia:
1. Interviewing Facility personnel and Respondent's contractors;
  2. Inspecting records, operating logs, and contracts related to the Facility;
  3. Reviewing the progress of Respondent in carrying out the terms of this Order;
  4. Conducting such tests, sampling, or monitoring as U.S. EPA deems necessary;
  5. Using a camera, sound recording, or other documentary type equipment; and
  6. Verifying the reports and data submitted to U.S. EPA by Respondent.
- B. Respondent shall provide U.S. EPA and its representatives access at all reasonable times to the Facility and subject to paragraph C below, to any other property to which access

is required for implementation of this Order. Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or its contractors.

- C. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of the date that the need for access becomes known. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives access to such property, and the payment of reasonable compensation in consideration of granting access. Any such access agreement shall provide for access by U.S. EPA and its representatives. Respondent shall ensure that

U.S. EPA's Project Coordinator has a copy of any access agreement(s).

- D. In the event that agreements for access are not obtained within thirty (30) days of approval of any workplan or submittal for which access is required, Respondent shall notify U.S. EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements.
- E. U.S. EPA may, in its discretion, assist Respondent in obtaining access. In the event U.S. EPA obtains access, Respondent shall undertake U.S. EPA-approved work on such property.
- F. The Respondent agrees to indemnify the United States as provided in Section XXI: Indemnification of the United States Government, for any and all claims arising from activities on such property.
- G. Nothing in this section limits or otherwise affects U.S. EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

- H. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation to perform corrective action, including corrective action beyond the Facility boundary, notwithstanding the lack of access.

### **XIII. RECORD PRESERVATION**

- A. Respondent shall retain, during the pendency of this Order and for a minimum of 6 years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order. Respondent shall notify U.S. EPA in writing ninety (90) days prior to the destruction of any such records, and shall provide U.S. EPA with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

Project Coordinator for Techalloy Company, Inc.  
Enforcement and Compliance Assurance Branch  
Waste, Pesticides, and Toxics Division (DE-9J)  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

#### **XV. DELAY IN PERFORMANCE/STIPULATED PENALTIES**

A. Unless there has been a written modification by U.S. EPA of a compliance date, an approved workplan condition, or excusable delay as defined in Section XVII: Force Majeure and Excusable Delay, if Respondent fails to comply with any term or condition set forth in this Order in the time or manner specified herein, Respondent shall pay stipulated penalties as set forth below upon written demand from U.S. EPA:

1. For failure to commence, perform, or complete any work required by an U.S. EPA-approved workplan in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$4,000 per day for each day of such violation thereafter;

2. For failure to complete or submit any workplans or reports (other than progress reports) in a manner acceptable to U.S. EPA or at the time required pursuant to this Order, or for failure to notify U.S. EPA of immediate or potential threats to human health and/or the environment, new releases of hazardous waste and/or new solid waste management units not previously identified, as required by this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$4,000 per day for each day of such violation thereafter;
3. For failure to complete or submit other work not included in paragraph A.1 and A.2. of this section in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$750 per day for the first seven days of such violation, \$1,500 per day for the eighth through twenty-first day of such violation, and \$2,500 per day for each day of such violation thereafter;
4. For failure to comply with any other provisions of this Order in a manner acceptable to U.S. EPA: \$750 per day



for the first seven days of such violation, \$1,500 per day for the eighth through twenty-first day of such violation, and \$2,500 per day for each day of such violation thereafter.

- B. Penalties shall begin to accrue on the day after complete performance is due or on the day that a violation occurs, and shall continue to accrue through the day of correction of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue to accrue regardless of whether U.S. EPA has notified the Respondent of a violation.
- C. All penalties owed to the United States under this section shall be due and payable within thirty (30) days of the Respondent's receipt from U.S. EPA of a written demand for payment of the penalties. Such a written demand will describe the violation and will indicate the amount of penalties due.
- D. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31) day after

Respondent's receipt of U.S. EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. § 3717, an additional penalty of 6% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for 90 or more days.

- E. All penalties shall be made payable by certified or cashier's check to the United States of America and shall be remitted to:

U.S. Department of Treasury  
Attention: U.S. EPA, Region 5,  
Office of the Comptroller  
P.O. Box 70753  
Pittsburgh, PA 15251

- F. All such checks shall reference the name of the Facility, the Respondent's name and address, and the U.S. EPA docket number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to U.S. EPA's Project Coordinator and assigned attorney.
- G. Respondent may dispute U.S. EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XVI: Dispute Resolution. The stipulated

penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or agreement. Respondent shall submit such payment to U.S. EPA within seven (7) days of receipt of such resolution in accordance with paragraph E of this section.

- H. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondent's obligation to comply with the terms and conditions of this Order.
- I. The stipulated penalties set forth in this section do not preclude U.S. EPA from pursuing any other remedies or sanctions which may be available to U.S. EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order including, but not limited to, seeking statutory penalties for such violations. However, all stipulated penalties which are paid by Respondent may be off-set against any penalties for the same violation which U.S. EPA collects as a result of other enforcement action against Respondent.

of such obligation will be extended by U.S. EPA for such time as is necessary to complete such obligation.

#### **XVIII. RESERVATION OF RIGHTS**

- A. U.S. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to this Facility, the work required by this Order, or Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under §3008(h)(2) of RCRA, 42 U.S.C. §6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which U.S. EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
- B. U.S. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order and to order that Respondent perform the work required or additional tasks.
- C. U.S. EPA reserves the right to perform any portion of the work consented to herein or any additional site

characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the environment. U.S. EPA may exercise its authority under CERCLA to undertake response actions at any time. In any event, U.S. EPA reserves its right to seek reimbursement from Respondent for costs incurred by the United States. Notwithstanding compliance with the terms of this Order, Respondent is not released from liability, if any, for the costs of any response actions taken or authorized by U.S. EPA in accordance with the requirements of this paragraph.

- D. If U.S. EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, U.S. EPA may order Respondent to stop further implementation of this Order for such period of time as U.S. EPA determines may be needed to abate any such release or threat and/or to undertake any action which U.S. EPA determines is necessary to abate such release or threat.

E. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that U.S. EPA's approval of a Scope of Work or any final workplan does not constitute a warranty or representation that the Scope of Work or workplan will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.

F. Notwithstanding any other provision of this Order, no action or decision by U.S. EPA pursuant to this Order, including without limitation, decisions of the Regional Administrator, the Director of the Waste, Pesticides and Toxics Division or any authorized representative of U.S. EPA, shall constitute final agency action giving rise to any right of judicial review prior to U.S. EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.

G. In any action brought by U.S. EPA for a violation of this Order, Respondent shall bear the burden of proving that U.S.

EPA's actions were arbitrary and capricious and not in accordance with law.

- H. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter. Respondent also shall not contest U.S. EPA's jurisdiction to issue or enforce this Order and shall not contest the terms of this Order. Respondent reserves its right to raise all other defenses, factual, legal, and equitable, in any action brought to enforce the provisions of this Order or in any other action relating to the Facility. Respondent has entered in to this Order in good faith without trial or adjudication of any issue of fact or law.

## **XX. OTHER APPLICABLE LAWS**

All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

## **XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT**

- A. Except as provided below, Respondent agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees (collectively, the United States), from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. Respondent shall not be required to indemnify the United States where its agencies, departments, agents or employees are contributorily negligent or guilty of other wrongful acts or omissions.



- B. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

## **XXII. FINANCIAL RESPONSIBILITY**

- A. Respondent shall provide financial assurance in the amount of \$4,500,000.00 for the implementation of corrective measures at the Facility, within ninety (90) days of the effective date of this Order. Respondent shall establish the financial assurance from among one or more of the following:

1. A trust fund;
2. A surety bond;
3. A letter of credit;
4. Insurance; or
5. A financial test and corporate guarantee.

- B. The wording and terms of the financial assurance instrument(s) shall be subject to approval by the U.S. EPA.

## **XXIII. MODIFICATION**

- A. This Order may only be modified by mutual agreement of U.S. EPA and Respondent. Any agreed modification shall be in

3008(h) A00C

**RCRA CONSENT AGREEMENT AND FINAL ORDER SIGN-OFF**

**PART I BACKGROUND**

Facility Name Techalloy Co. Inc.  
Facility EPA ID Number ILD 005 174 975  
Docket Number \_\_\_\_\_  
ECAB Assignee/Phone Buller 6-4568 ORC Assignee/Phone Peace 3-5 Kline 6-7167  
Summary of Agreement Corrective Measures Implementation (CMI) Order

**PART II CONCURRENCES ON PROPOSED CAFO (PROPOSAL NO. \_\_\_\_\_)**

	Initials	Date	Agree	Disagree
1. ECAB Assignee	<u>MB</u>	<u>7/20/98</u>	<u>✓</u>	_____
2. <u>CAPM</u> Chief, ECAB Section	<u>MB</u>	<u>7/22/98</u>	<u>✓</u>	_____
3. Asst. Regional Counsel	<u>MB</u>	<u>9/21/98</u>	<u>✓</u>	_____
4. Chief, ECAB	<u>MB</u>	<u>8/18/98</u>	<u>✓ w/comment B</u>	<u>*</u>
	<u>MB</u>	<u>9/29/98</u>	<u>✓</u>	_____

**PART III RETURN TO ~~ORC~~ ECAB FOR TRANSMITTAL OF TWO ORIGINAL COPIES OF DRAFT TO RESPONDENT.**

PROPOSED ORDER

William Buller

**PART IV FINAL CAFO APPROVAL, AFTER RESPONDENT HAS SIGNED BOTH COPIES OF PROPOSED CAFO**

	Initials	Date	Agree	Disagree
1. ECAB Assignee	_____	<u>/ /</u>	_____	_____
2. Chief, ECAB Section	_____	<u>/ /</u>	_____	_____
3. Asst. Regional Counsel	_____	<u>/ /</u>	_____	_____
4. ORC Section Chief	_____	<u>/ /</u>	_____	_____
5. Chief, ECAB	_____	<u>/ /</u>	_____	_____
6. Director, WPTD	_____	<u>/ /</u>	_____	_____
7. Regional Administrator	_____	<u>/ /</u>	_____	_____

**PART V RETURN TO A. PERRY, DRE-8J, FOR MAILING**

☐ **HAVE YOU COMPLETED THE CASE CONCLUSION DATA SHEET? DO NOT FORWARD IF IT IS NOT INCLUDED IN SIGN-OFF PACKAGE.**

\* Revisions per MB 4/28/98  
Made comments



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

*Corrective Action*  
RECEIVED FEB 5 1993  
WMD RCRA  
RECORD CENTER *Corrective Action*

FEB 03 1993

REPLY TO THE ATTENTION OF:

HR-8J

Mr. Henry Lopes  
Techalloy Company, Inc.  
370 Franklin Turnpike  
Mahwah, New Jersey 07430

Re: RCRA 3008(h) Consent Order  
Techalloy Company, Inc.  
→ ILD 005 178 975

V-W- 007 - '93

Dear Mr. Lopes:

This letter is to acknowledge receipt of the Administrative Order on Consent signed by Techalloy Company, Inc. A fully executed copy of it is enclosed for your files.

Please contact Mr. William Buller of my staff at (312) 886-4568, if you have any questions. Your cooperation in resolving the matter is appreciated.

Sincerely yours,

Norman R. Niedergang, Acting Associate  
Division Director  
Office of RCRA  
Waste Management Division

Enclosure

cc: Gary King, IEPA  
Paul Jagiello, IEPA  
Dennis P. Harkawik, Attorney for Techalloy  
Carlos Sernas

6. 2. 7

(11)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V

IN THE MATTER OF:

TECHALLOY COMPANY, INC.  
UNION, ILLINOIS

U.S. EPA I.D. #ILD 005 178 975

RESPONDENT.

ADMINISTRATIVE ORDER  
ON CONSENT

U.S. EPA DOCKET NO.: V-W- 007 - '93

Proceeding under Section 3008(h)  
of the Resource Conservation and  
Recovery Act of 1976, as  
amended, 42 U.S.C. §6928(h).

I. JURISDICTION

This ADMINISTRATIVE ORDER ON CONSENT (Consent Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, 42 U.S.C. §6928(h). The authority vested in the Administrator has been delegated to the Regional Administrators by U.S. EPA Delegation Nos. 8-31 and 8-32, dated April 16, 1985, and further delegated to the Director, Waste Management Division, by U.S. EPA Delegation Nos. 8-31 and 8-32 on September 14, 1987.

This Consent Order is issued to Techalloy Company, Inc. (Respondent), the owner and operator of a facility located at Olson and Jefferson Roads, Union, Illinois (the Facility). The Respondent consents to, and agrees not to contest, the U.S. EPA's jurisdiction to issue this Consent Order and to enforce its terms. Further, the Respondent will not contest the U.S. EPA's jurisdiction to: compel compliance with this Consent Order in any subsequent

enforcement proceedings, either administrative or judicial; require the Respondent's full or interim compliance with the terms of this Consent Order; and impose sanctions for violations of this Consent Order.

## II. PARTIES BOUND

A. This Consent Order shall apply to and be binding upon the Respondent and its officers, directors, employees, agents, and successors and assigns, and upon all persons, independent contractors, contractors, and consultants acting under or for the Respondent.

B. No change in ownership or corporate or partnership status relating to the Facility will in any way alter the Respondent's responsibility under this Consent Order unless the U.S. EPA and the Respondent mutually agree to the altering of Respondent's responsibility under this Consent Order and amend this Consent Order, in accord with the procedures contained in Paragraph A of Section XXI of this Consent Order, to state the alterations of Respondent's responsibility on which they mutually agree.

C. The Respondent shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Consent Order within one (1) week of the effective date of this Consent Order or the date of such retention, and shall condition all such contracts on compliance with the terms of this Consent Order.

D. The Respondent shall give notice of this Consent Order to any successor in interest prior to transfer of ownership or operation of the Facility and shall notify the U.S. EPA of such transfer no later than ninety (90) days prior to the scheduled date of the transfer.

### III. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of the U.S. EPA and the Respondent are: (1) to perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release of hazardous wastes and hazardous constituents from the Facility and the potential for any future release of hazardous wastes and hazardous constituents from the Facility; and (2) to perform a Corrective Measures Study (CMS) to identify and evaluate alternatives for the corrective action necessary to prevent or mitigate any migration or release of hazardous wastes or hazardous constituents from or at the Facility; and (3) to perform Interim Measures (IM) at the Facility if current or potential threats to human health or welfare or the environment are identified.

### IV. FINDINGS OF FACT

A. The Respondent is a Pennsylvania corporation doing business in the State of Illinois and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15), and 40 CFR 260.10.

B. The Respondent is a generator and an owner and operator of a hazardous waste management facility located at Olson and Jefferson Roads, Union, Illinois. The Respondent engaged in treatment, storage, and/or disposal of hazardous waste at the Facility subject to interim status requirements, 40 CFR Part 265 and Ill. Adm. Code Part 725.

C. The Respondent owned and operated the Facility as a hazardous waste management facility on and after November 19, 1980, the applicable date which renders facilities subject to interim status requirements or the requirement

to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§6924 and 6925.

D. Pursuant to Section 3010 of RCRA, 42 U.S.C. §6930, the Respondent notified the U.S. EPA of its hazardous waste activity. In its notification dated August 15, 1980, the Respondent identified itself as a generator of hazardous waste and an owner/operator of a treatment, storage, and disposal facility for hazardous waste.

E. In its Part A permit application dated January 18, 1988, the Respondent identified itself as handling the following hazardous waste at the Facility: (1) Hazardous waste exhibiting the characteristic of corrosivity (U.S. EPA Hazardous Waste Number D002) and reactivity (U.S. EPA Hazardous Waste Number D003).

F. The Techalloy facility located in Union, McHenry County, Illinois, is a steel wire drawing facility, and has been in operation since 1960. Presently, Respondent processes steel and nickel alloy rod at the Facility. Unprocessed, hot-rolled rod is annealed and drawn into wires of varying strengths and diameters. A variety of coatings and cleaners are presently utilized in the production processes, including acidic and caustic cleaners, coating solutions, dyes and rinses.

G. A Preliminary Assessment/Visual Site Inspection (PA/VSI) of Respondent's Facility, conducted under U.S. EPA authority on November 8, 1991, revealed the following Solid Waste Management Units: (1) hazardous wastewater treatment facility; (2) wire slag disposal area; (3) copper cyanide waste destruction unit; (4) BG-5 oil drums; (5) concrete evaporation pad; (6) spent acid holding



pond; and (7) plating wastewater disposal area. The PA/VSI also identified an Area of Concern, the acid tank room (pickle house). The hazardous wastewater treatment facility, the copper cyanide waste destruction unit, and the acid tank room were determined to be hazardous waste management units and are currently undergoing closure under RCRA.

H. Investigations in 1990 and 1991 revealed that ground water underlying Respondent's facility was contaminated with volatile organic compounds (VOCs), primarily 1,1,1-trichloroethane. Analytical results of samples collected from groundwater sampling points at the Facility showed 1,1,1,-trichloroethane concentrations as high as 200 parts per million. The investigations revealed that the VOC contamination in ground-water extended to approximately 4000 feet northwest of the Facility. Ground-water data indicate that the ground-water flow direction in the vicinity of the Facility is northwestward. Thus, groundwater contamination originating at the Respondent's facility would migrate northwestward.

I. The concrete evaporation pad (noted in paragraph G) was in use from 1968 until 1979, and is believed to be the primary source of VOC contamination. This waste management unit consists of a concrete evaporation pad where spent solvents consisting of VOCs, including trichloroethane, were disposed of by dumpage onto the pad. A visual site inspection conducted by a U.S. EPA contractor on April 3, 1991, revealed that there was minimal containment to prevent run-off from the concrete pad and that cracks existed throughout the pad. Analytical results of soil samples collected at the concrete pad showed that the soil contained 1,1,1,-trichloroethane at levels as high as 1000 milligrams per kilogram.

J. Because of the human health risk it poses, the maximum concentration level of 1,1,1-trichloroethane in drinking water as promulgated under the Safe Drinking Water Act is 0.2 mg/l. Sampling of residential wells in the neighboring village of Union, Illinois, revealed three wells that had detectable levels of VOCs, including 1,1,1-trichlorethane which was detected in one of the wells at 0.009 mg/l.

V. U.S. EPA's CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set out above, and after consideration of the administrative record, the Director, Waste Management Division of U.S. EPA, Region V, has made the following conclusions of law and determinations:

- A. The Respondent is a "person" within the meaning of Section 1004(15) of RCRA, 42 U.S.C. §6903(15).
- B. The Respondent is the owner and operator of a facility that has operated and is operating subject to Section 3005(e) of RCRA, 42 U.S.C. §6925(e).
- C. Certain wastes and waste constituents found at the Facility are hazardous wastes or hazardous constituents as defined by Section 1004(5) of RCRA, 42 U.S.C. §6903(5), and 40 CFR Part 261.
- D. There is or has been a release of hazardous wastes or hazardous constituents into the environment from the Respondent's Facility.
- E. The actions required by this Consent Decree are necessary to protect human health and the environment.

VI. WORK TO BE PERFORMED

Pursuant to Section 3008(h) of RCRA, 42 U.S.C. §6928(h), the Respondent agrees and hereby is ordered to perform the following acts in the manner and by the dates specified. All work undertaken pursuant to this Consent Order shall be performed, at a minimum, in a manner consistent with the following: the attached Scopes of Work, the RCRA Facility Investigation (RFI) Workplan and Report, the Corrective Measures Study (CMS) Workplan and Report, and all other Workplans; RCRA and its implementing regulations; and relevant U.S. EPA guidance documents. Relevant guidance may include, but is not limited to: the "RCRA Facility Investigation (RFI) Guidance" (EPA 530/SW89-031); the "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986); the "Test Methods for Evaluating Solid Waste" (SW-846, November 1986); and the "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities" (EPA 530/SW-85-031, July 1986).

- A. 1. Within thirty (30) days of the effective date of this Consent Order, Respondent shall submit a Private Well Sampling Plan (PWSP) to U.S. EPA for approval. The PWSP shall address those private properties in and around Union, Illinois that may potentially be impacted by contaminated ground water migrating from Respondent's Facility. This PWSP shall include the boundaries of the well sampling area, a list of properties within the boundaries that have water wells, an attestation, pursuant to paragraph L of Section VI, by a Responsible Official of Respondent that the list of properties with water wells is complete and up to date, a list of constituents for which the samples will be analyzed, data that establish ground-

water background levels of the constituents, and a description of the quality assurance/quality control procedures to be employed for sampling and analysis. At a minimum, the boundaries of the PWSP shall include the residences listed in Exhibit A.

2. The requirements of this paragraph shall apply to each property, with one or more water wells, located within the well sampling area boundaries of the U.S. EPA approved PWSP. Within fifteen (15) days of U.S. EPA's approval of the PWSP, Respondent shall make an offer, in writing to each owner of such property, to perform sampling and analysis of the water well(s) on that property within fifteen (15) days of receipt of the notification. For any property without a municipal water supply, and for which contaminants are detected in well samples at levels either above the maximum contaminant levels (MCLs) promulgated under the Safe Drinking Water Act, or, for contaminants without promulgated MCLs, above the human health based limits established according to procedures given in the document - RCRA Facility Investigation Guidance Vol. I, EPA 530/SW-89-031 (May 1989), Respondent shall offer to provide the property with a connection to the municipal water supply or a filtering system for the existing well. For the purpose of this paragraph, contaminants shall mean those constituents, and their degradation products, identified in ground water at the Respondent's facility which exceed background levels. Respondent shall also offer to secure any contaminated well in accordance with local and State specifications and/or regulations, so as to prevent use of the well. For those properties with a municipal water supply, but for

which contaminant levels in well samples exceed the above stated criteria, Respondent shall offer to properly secure any contaminated well, or if requested by property owner, provide a filtering system for the existing well or an equivalent water supply by extending the property's existing water supply to the location of the secured well. If U.S. EPA determines that ground water contamination migrating from Respondent's Facility extends beyond the boundaries of the PWSP, U.S. EPA will notify Respondent that the boundaries of the PWSP shall be extended as so specified. Respondent shall then sample all residential wells in the expanded area within thirty (30) days of notification. After the initial well sampling, Respondent shall perform semi-annual sampling/analysis of the wells in accordance with the PWSP until all wells are secured or until U.S. EPA approves the termination of sampling/analysis.

3. Respondent may perform resampling and analysis of wells which show concentration limits were exceeded. Resampling must be done within fifteen (15) days of Respondent's receipt of analytical results, and shall include the collection of two (2) samples of the well in question. If analytical results of one or both of the duplicate samples of the re-sampling show contamination levels exceeded the criteria of paragraph A. 2. of this Section, Respondent shall make the appropriate offers to the affected property owners. Respondent shall make such offers within fifteen (15) days of receipt of analytical results (either the initial sampling results if not resampled, or the second sampling results if resampled) which show

contaminant levels exceeded the criteria of paragraph A. 2. of this Section. Within fifteen (15) days of receipt of analytical results, Respondent shall submit copies of the results to U.S. EPA. Within forty-five (45) days of receipt of analytical results which show, or confirm, that limits were exceeded, Respondent shall submit to U.S. EPA, an attestation by a Responsible Official, pursuant to paragraph L of Section VI, that the appropriate offers were made to the affected property owner, and summary of the actions taken. Respondent shall fulfill the offer to the property owners as accepted by owners, within 365 days after the date of acceptance by owners.

4. Respondent shall, within sixty (60) days of the effective date of this Consent Order, submit to the U.S. EPA for approval, a Workplan for Interim Measures for pumping contaminated ground water and treating it to acceptable levels to meet applicable laws for the method of disposal used, and which effectively mitigates the impact on actual and potential receptors of VOC contaminated ground water migrating from the Facility. Within sixty (60) days of approval by U.S. EPA of the Interim Measures Workplan, Respondent shall submit the Interim Measures Final Design to U.S. EPA for approval. Respondent shall, within seventy-five (75) days of U.S. EPA's approval of the Interim Measures Final Design, submit all permit applications to the appropriate agencies, as required to implement the approved Interim Measures. Respondent shall, within 270 days of approval of all permits, fully implement the Interim Measures approved by U.S. EPA. Respondent shall inform U.S. EPA of the

date that all permits for the Interim Measures are approved, within fifteen (15) days of such approval. Respondent shall notify U.S. EPA of the date the pump and treat system becomes fully operational, within fifteen (15) days of startup of the system. The pump and treat system shall remain operational until the final corrective measures for ground-water cleanup is fully operational.

In the event the Respondent identifies any other current or potential threat to human health or welfare or the environment, the Respondent shall immediately notify the U.S. EPA orally and in writing within fourteen (14) days, summarizing the immediacy and magnitude of the potential threat to human health or welfare or the environment. Within thirty (30) days of notifying the U.S. EPA, the Respondent shall submit to the U.S. EPA an Interim Measures Workplan for approval that identifies Interim Measures which mitigate this threat and are consistent with and integrated into any long-term solution at the Facility.

B. Within ninety (90) days of the effective date of this Consent Order, the Respondent shall submit to the U.S. EPA a Workplan for a RCRA Facility Investigation (RFI Workplan). The RFI Workplan is subject to approval by the U.S. EPA and shall be performed in a manner consistent with the RFI Scope of Work contained in Attachment I to this Consent Order. Attachment I is incorporated by reference into this Consent Order as if fully set forth herein. The RFI Workplan shall be developed, at a minimum, in accordance with RCRA and its implementing regulations and relevant U.S. EPA guidance documents.

C. The RFI Workplan shall be designed to define the presence, nature, magnitude, extent, direction, and rate of movement of any hazardous wastes or hazardous constituents within and beyond the Facility boundary. The RFI Workplan also shall be designed to determine the potential for future releases of hazardous wastes or hazardous constituents from the Facility, including releases initially within the boundaries of the Facility. The RFI Workplan shall document the procedures the Respondent shall use to conduct those investigations that are necessary: (1) to characterize the potential pathways of contaminant migration; (2) to characterize the source or sources of contamination at the wire slag disposal area, BG-5 oil drums, concrete evaporation pad, spent acid holding pond, and plating wastewater disposal area [Solid Waste Management Units referenced in paragraph G of Section IV]; (3) to define the degree, magnitude, and extent of contamination; (4) to identify actual or potential receptors; and (5) to support the development of alternatives from which one or more corrective measures will be selected by the U.S. EPA. A specific schedule for implementation of all activities shall be included in the RFI Workplan.

D. Respondent shall fulfill all closure requirements pursuant to 35 Illinois Administrative Code 725 Subpart G, for the hazardous wastewater treatment facility, the copper cyanide waste destruction unit, and the acid tank room (pickle house).

E. In accordance with the provisions of Attachment I, Task III, the RFI Workplan shall include: (1) a Project Management Plan; (2) a Quality Assurance Project Plan; (3) a Data Management Plan; (4) a Health and Safety



Plan; and (5) a Community Relations Plan. The Workplan shall also include a schedule of activities and the time frame for the RFI draft and final reports to be submitted.

F. Upon completion of the RFI, the Respondent shall conduct a Corrective Measures Study (CMS) in accordance with the CMS Scope of Work in Attachment II of this Consent Order. Within 30 days of Respondent's submittal of the Final RFI report, Respondent shall submit to U.S. EPA a CMS Workplan, in the form and containing the information stated by Attachment II. Attachment II is incorporated into this Consent Order by reference as if fully set forth herein.

G. Upon the U.S. EPA's selection of the corrective measures, if the Respondent has complied with the terms of this Consent Order, the U.S. EPA shall provide a ninety (90) day period for negotiation of an Administrative Order on Consent (or a Judicial Consent Decree) for implementation of the selected corrective measures.

H. The U.S. EPA shall review the proposed Workplans including the PWSP and the Interim Measures Final Design, and inform the Respondent in writing of the approval, approval with modification, or disapproval of the Workplans, the PWSP and Final Design, or any part thereof. In the event of any disapproval, the U.S. EPA shall specify the deficiencies and reasons for disapproval and any necessary modifications. Within thirty (30) days of receipt of the U.S. EPA's disapproval of any Workplan, the PWSP, or Final Design, the Respondent shall amend the documents, making the changes required by the U.S. EPA, and shall resubmit the documents to the U.S. EPA. The U.S. EPA shall approve, approve with modifications, or disapprove the resubmitted document. If the

Workplan, or PWSP, or Final Design is approved or approved with modifications by the U.S. EPA, it shall be deemed the approved document. If the document is disapproved, this disapproval and any subsequent disapproval shall, unless waived by the U.S. EPA, be deemed a violation of this Consent Order. The U.S. EPA will not approve a proposed Workplan, PWSP, or design unless it determines that the document is of a quality and thoroughness acceptable to it. The Workplans, PWSP, and Interim Measures Final Design approved by the U.S. EPA shall be deemed incorporated into and part of this Consent Order.

I. Within thirty (30) days of U.S. EPA's approval of any Workplan, or as specified otherwise in this Consent Order, the Respondent shall commence work, and shall implement the tasks required by the Workplan in accordance with the standards, specifications, and schedule stated in that Workplan as it was approved or modified by the U.S. EPA.

J. Beginning with the month following the effective date of this Consent Order, the Respondent shall provide the U.S. EPA with progress reports for each month by the tenth day of the following month. The progress reports shall conform to requirements in the relevant Scopes of Work contained in Attachments I and II, and also shall report all actions taken pertaining to the PWSP and Interim Measures.

K. The Respondent shall provide draft and final RFI and CMS reports to the U.S. EPA for U.S. EPA approval in accordance with the schedules contained in this Consent Order and Attachments I and II.

L. A Responsible Official shall personally attest to the accuracy of information contained in each of the Respondent's reports, certifications of

compliance, and documents evidencing that compliance, pursuant to 18 U.S.C. §1001. The term "Responsible Official" means a responsible corporate officer of the Respondent. A responsible corporate officer is (a) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or (b) the manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$35 million (in 1987 dollars when the Consumer Price Index was 345.3), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

The attestation statement in the Respondent's reports to the U.S. EPA shall state as follows:

"I certify that the information contained in or accompanying this (submission) (document) is true, accurate, and complete."

"As to (the) (those) identified portion(s) of this (submission) (document) which I cannot personally verify (is) (are) true and accurate, I certify as the company official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification that this information is true, accurate, and complete."

M. The U.S. EPA shall review all draft or final reports and notify the Respondent in writing of U.S. EPA's approval, approval with modifications, or disapproval of each report or any part thereof. Such reports are to be submitted the U.S. EPA for U.S. EPA's approval as specified by this Order and Attachment I and Attachment II. In the event of any disapproval, the U.S. EPA

shall specify in writing the deficiencies of the report and the reasons for such disapproval. Within thirty (30) days of receipt of the U.S. EPA's disapproval of any report, the Respondent shall amend it and submit a revised report. The U.S. EPA shall approve, approve with modifications, or disapprove the resubmitted report. If the report is approved or approved with modifications by the U.S. EPA, it shall be deemed the approved report. If the resubmitted report is disapproved, this disapproval and any subsequent disapproval shall, unless waived by the U.S. EPA, be deemed a violation of this Consent Order. The U.S. EPA will not approve any draft or final reports unless it determines that the report is of a quality and thoroughness acceptable to it. Reports approved by the U.S. EPA shall be deemed incorporated into and part of this Consent Order.

N. For all documents, including Workplans, draft and final reports, progress reports, and other correspondence, that are to be submitted to the U.S. EPA pursuant to this Consent Order, three copies of each document shall be hand delivered or sent by certified mail, return receipt requested, to the U.S. EPA Project Coordinator. In addition, for all such documents that are to be submitted to the U.S. EPA pursuant to this Consent Order, three copies of each document shall be hand delivered or sent by certified mail, return receipt requested, to the IEPA Project Coordinator designated pursuant to Section XIII of this Consent Order.

O. All work performed pursuant to this Consent Order shall be under the direction and supervision of a professional engineer or geologist with expertise in hazardous waste site cleanup. On or before the effective date of this Consent Order, the Respondent shall notify the U.S. EPA in writing of the

name, title, and qualifications of the engineer or geologist, and any of the contractors or subcontractors and their personnel to be used in carrying out the terms of this Consent Order.

P. The U.S. EPA may determine that certain tasks, including investigatory work or engineering evaluations, are necessary in addition to the tasks and deliverables included in the RFI and CMS Workplans when new findings indicate that such additional work is necessary. The U.S. EPA shall request in writing that the Respondent perform the additional work and shall specify the basis and reasons for the determination that the additional work is necessary. Within thirty (30) days after the Respondent's receipt of this request, the Respondent shall have the opportunity to meet with the U.S. EPA to discuss the additional work requested. Thereafter, the Respondent shall perform the additional work the U.S. EPA has requested according to a U.S. EPA approved Workplan. All additional work performed by the Respondent under this paragraph shall be performed in a manner consistent with this Consent Order.

#### VII. QUALITY ASSURANCE

Throughout all sample collection and analysis activities, the Respondent shall use U.S. EPA-approved quality assurance, quality control, and chain-of-custody procedures as specified in the approved Workplans. In addition, the Respondent shall:

A. Inform the U.S. EPA Project Coordinator in advance which laboratories will be used by the Respondent and ensure that U.S. EPA personnel and U.S. EPA-authorized representatives have reasonable access to the laboratories and personnel used for analyses.

B. Ensure that laboratories used by the Respondent for analyses perform such analyses according to U.S. EPA methods included in "Test Methods for Evaluating Solid Waste" (SW-846, November 1986) or other methods deemed satisfactory to the U.S. EPA. If methods other than U.S. EPA methods are to be used, the Respondent shall submit to the U.S. EPA for the U.S. EPA's approval all protocols to be used for analyses no later than thirty (30) days prior to the commencement of analyses.

C. Ensure that laboratories used by the Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by U.S. EPA. As part of such a program, and upon the request of the U.S. EPA, such laboratories shall perform analyses of samples provided by the U. S. EPA to demonstrate the quality of the analytical data. The U.S. EPA has the right to reject any physical or analytical data submitted by the Respondent.

#### VIII. PUBLIC COMMENT AND PARTICIPATION

A. Upon approval by the U.S. EPA of a Corrective Measures Study Draft Final Report, the U.S. EPA shall make the RCRA Facility Investigation (RFI) Final Report, the Corrective Measures Study (CMS) Draft Final Report, a summary of the corrective measures proposed by the U.S. EPA, and the U.S. EPA's justification for proposing selection of the corrective measures available to the public for review and comment for at least twenty-one (21) days.

B. Following the public review and comment period, the U.S. EPA shall notify the Respondent of the corrective measures selected by the U.S. EPA. If the corrective measures recommended in the Corrective Measures Study Draft Final

Report are not the corrective measures selected by the U. S. EPA after consideration of public comments, the U. S. EPA shall inform the Respondent in writing of the reasons for such decision, and the Respondent shall modify the RFI Final Report and the CMS Draft Final Report based upon public comment if directed to do so by the U. S. EPA.

C. The Administrative Record supporting the selection of the corrective measures will be available for public review at the offices of the U.S. EPA, Region V, from the effective date of the Consent Order through the public review and comment period.

#### IX. ON-SITE AND OFF-SITE ACCESS

A. The U.S. EPA and any representatives of the U.S. EPA, including contractors, are authorized to enter and freely move about all property at the Facility for the purposes of, inter alia: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of the Respondent in carrying out the terms of this Consent Order; conducting such tests, sampling, or monitoring as the U.S. EPA or the U.S. EPA's Project Coordinator deem necessary, using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to the U.S. EPA by the Respondent. The Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Consent Order.

B. To the extent that work required by this Consent Order, or by any approved Workplans prepared pursuant hereto, must be done on property not owned or

controlled by the Respondent, the Respondent will use its best efforts to obtain site access agreements from the present owner(s) of such property within thirty (30) days of approval of any Workplan for which site access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from the Respondent to the present owners of the property requesting access agreements to permit the Respondent, the U.S. EPA, and the U.S. EPA's authorized representatives access to the property. Each access agreement shall be incorporated by reference into this Consent Order. In the event that agreements for access are not obtained within thirty (30) days of approval of any Workplan, the Respondent shall notify the U.S. EPA in writing within thirty (30) days thereafter regarding both the Respondent's efforts undertaken to obtain access and the Respondent's failure to obtain the agreements.

C. Nothing in this Section limits or otherwise affects the U.S. EPA's right of access and entry pursuant to applicable law, including RCRA and the Comprehensive Environmental Response and Compensation Liability Act of 1980, as amended (CERCLA).

X. SAMPLING AND DATA/DOCUMENT AVAILABILITY

A. The Respondent shall submit to the U.S. EPA the results of all sampling and/or tests or other data generated by, or on behalf of, the Respondent, in accordance with the requirements of this Consent Order and its Attachments.

B. The Respondent shall notify the U.S. EPA at least fourteen (14) days before engaging in any field activities, such as well drilling, installation of equipment, or sampling. At the request of the U.S. EPA, the Respondent



shall provide or allow the U.S. EPA and authorized representatives of the U.S. EPA to take split samples of all samples collected by the Respondent pursuant to this Consent Order. Similarly, at the request of the Respondent, the U.S. EPA shall allow the Respondent or its authorized representatives to take split or duplicate samples of all samples collected by the U.S. EPA under this Consent Order. The U.S. EPA will notify the Respondent at least fourteen (14) days before conducting any sampling under this Consent Order.

C. The Respondent may assert a business confidentiality claim covering all or part of any information submitted to the U.S. EPA or pursuant to this Consent Order (40 CFR 2.203, 41 Fed. Reg. 36902 (September 2, 1976)). Any assertion of confidentiality shall be adequately substantiated by the Respondent when the assertion is made, and shall contain the information specified by 40 CFR 2.203 (b) and 40 CFR 2.204(e)(4). Information determined to be confidential by the U.S. EPA shall be disclosed only to the extent permitted by 40 CFR Part 2. If no such confidentiality claim accompanies this information when it is submitted to the U.S. EPA, it may be made available to the public by the U.S. EPA without further notice to the Respondent. The Respondent agrees not to assert any confidentiality claim with regard to any physical or analytical data.

#### XI. RECORD PRESERVATION

The Respondent agrees that it shall preserve during the pendency of this Consent Order and for a minimum of six (6) years after this Consent Order's termination, all data, records, and documents in its possession or in the possession of its divisions, officers, employees, agents, contractors, successors, and assigns which relate in any way to this Consent Order or to

hazardous waste management and/or hazardous waste disposal at the Facility. After six (6) years, the Respondent shall make such records available to the U.S. EPA for inspection or shall provide copies of any such records to the U.S. EPA. The Respondent shall notify the U.S. EPA thirty (30) days prior to the destruction of any such records, and shall provide the U.S. EPA with the opportunity to take possession of any such records.

XII. PROJECT COORDINATOR

A. Within ten (10) days of the effective date of this Consent Order, the U.S. EPA, the Illinois Environmental Protection Agency (IEPA), and the Respondent each shall designate a Project Coordinator. The Respondent shall notify in writing the U.S. EPA and the IEPA of the Project Coordinator it has selected. The Project Coordinator of the U.S. EPA and the Respondent shall be responsible for overseeing the implementation of this Consent Order. The U.S. EPA's Project Coordinator will be the designated representative of the U.S. EPA at the Facility. All communications between the Respondent, the U.S. EPA, and the IEPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, shall be directed through the respective Project Coordinators.

B. The parties agree to provide at least thirty (30) days written notice prior to changing Project Coordinators.

C. If the U.S. EPA determines that activities in compliance or noncompliance with this Consent Order have caused or may cause a release of hazardous waste, hazardous constituents, or a pollutant or contaminant, or have caused or may

cause a threat to public health or the environment, the U.S. EPA may order the Respondent to stop further implementation of this Consent Order for such a period of time as may be needed to abate, and may order the Respondent to undertake any action which the U.S. EPA determines is necessary to abate, any such release, threat of release, or threat to public health or the environment.

D. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

### XIII. NOTIFICATION

Unless otherwise specified, reports, correspondence, approval, disapproval, notices, and other submissions relating to or required under this Consent Order shall be in writing and shall be distributed as follows:

1. Three copies of all documents to be submitted to the U.S. EPA are to be sent to:

William Buller  
United States Environmental Protection Agency  
Region V  
RCRA Enforcement Branch, (HRE-8J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604

2. Three copies of all documents to be submitted to the IEPA are to be sent to:

Kevin Lesko  
Division of Land and Pollution Control  
Illinois Environmental Protection Agency  
P.O. Box 19276  
Springfield, Illinois 62794-9276

3. Documents to be submitted to the Respondent are to be sent to:

Henry Lopes  
Techalloy Company, Inc.  
370 Franklin Turnpike  
Mahwah, New Jersey 07430

XIV. DELAY IN PERFORMANCE/STIPULATED PENALTIES

A. Unless there has been a written modification of a compliance date by the U.S. EPA, or an excusable delay as defined under the "Force Majeure and Excusable Delay" provision of this Consent Order, in the event that the Respondent fails to meet any requirement set forth in this Consent Order, the Respondent shall pay stipulated penalties as set forth below. Compliance by the Respondent shall include completion of an activity under this Consent Order or a Workplan approved under this Consent Order, or completion of any matter under this Consent Order, in a manner acceptable to and approvable by the U.S. EPA and within the specified time schedules which are in and approved under this Consent Order.

(1) For failure to commence work as prescribed in this Consent Order: \$1125 per day for the first one to seven days of delay, and \$1500 for each day of delay thereafter;

(2) For failure to submit any draft reports, final reports, and permit applications at the time required pursuant to this Consent Order: \$750 per day for the first one to seven days of delay, and \$1125 per day for each day of delay thereafter;

(3) For failure to submit progress reports at the time required pursuant to this Consent Order: \$150 per day for the first one to seven days of delay, and \$375 per day for each day of delay thereafter;

(4) For failure to submit other deliverables required by this Consent Order: \$375 per day for the first one to seven days of delay, and \$750 per day for each day of delay thereafter; and

(5) For other failure to comply with provisions of this Consent Order after receiving notice from the U.S. EPA of noncompliance: \$750 per day for the first one to seven days of noncompliance and \$1500 per day for each day of noncompliance thereafter.

B. All penalties shall begin to accrue on the date that complete performance is due or a violation occurs, and shall continue to accrue through the final day of violation or until the day that the noncompliance is corrected.

Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order.

C. All penalties owed to the U.S. EPA under this Section shall be due within thirty (30) days of the Respondent's receipt of a notification of noncompliance or violation. Such notification shall describe the noncompliance and shall indicate the amount of penalties due. Interest shall accrue, at the rate established by the Secretary of the Treasury pursuant to 31 U.S.C. Section 3717, on the unpaid balance at the end of the thirty day period.

D. All penalties shall be made payable by certified or cashier's check to the Treasurer of the United States, and shall be remitted to:

United States Environmental Protection Agency  
Region V  
P.O. Box 70753  
Chicago, Illinois 60673

All payments shall reference the name of the Facility, the Respondent's name and address, and the docket number of this action. Copies of the transmittal of payment shall be sent simultaneously to the U.S. EPA Project Coordinator.

E. The Respondent may dispute the U.S. EPA's right to the stated amount of penalties by invoking the dispute resolution procedures under Section XV of this Consent Order. If the Respondent does not prevail upon resolution of the dispute, the U.S. EPA has the right to collect all penalties which accrued prior to and during the period of dispute. If the Respondent prevails upon resolution of the dispute, no penalties shall be payable. If neither the position of the U.S. EPA nor the position of the Respondent prevails completely, stipulated penalties shall be due as determined by the U.S. EPA pursuant to Paragraph D of Section XV.

F. Neither the filing of a petition to resolve a dispute nor the payment of penalties shall alter in any way the Respondent's obligation to complete the performance required by, and comply with all deadlines and schedules set by, this consent Order.

G. The stipulated penalties set forth in this Section do not preclude the U.S. EPA from pursuing any other remedies or sanctions which may be available to the U.S. EPA by reason of the Respondent's failure to comply with any of the requirements of this Consent Order.

XV. DISPUTE RESOLUTION

A. The parties shall use their best efforts to informally and in good faith resolve disputes or differences of opinion relating to the conduct of activities required under this Consent Order. If, however, disputes arise concerning this Consent Order, including but not limited to the implementation of the RFI/CMS Workplan, approval documents, the scheduling of any work, or any other obligations assumed hereunder, which the parties are unable to resolve informally, the Respondent shall, within twenty (20) days of its knowledge of the dispute, present a written notice of such dispute to the U.S. EPA. The written notice of dispute shall set forth the specific points of dispute, the position of the Respondent and the basis for that position, and any actions which the Respondent considers necessary to resolve the dispute.

B. Within twenty (20) days of the U.S. EPA's receipt of a written notice from the Respondent pursuant to Paragraph A of this Section, the U.S. EPA shall provide a written response to the Respondent setting forth its position and the basis for its position. During the time period between receipt of the written notice from the Respondent and issuance of the U.S. EPA's written response, the parties shall attempt to negotiate in good faith a resolution of their differences.

C. Following expiration of the time period described in Paragraph B above, if the U.S. EPA concurs with the position of the Respondent, the dispute shall be deemed resolved in favor of the Respondent. The Respondent shall be provided with a written statement of such dispute resolution by the U.S. EPA, and this Consent Order will be modified to include any necessary extension of time or variances of work. No stipulated penalties will be due under these circumstances.

D. Following expiration of the time period described in Paragraph B above, if the U.S. EPA does not concur with the position of the Respondent, the U.S. EPA, as represented by the Associate Director Waste Management Division, Office of RCRA, U.S. EPA, Region V, shall resolve the dispute, based upon and consistent with the terms and objectives of this Consent Order, and shall provide the Respondent with a written statement of the dispute resolution which shall be incorporated into this Consent Order.

E. During the pendency of the dispute resolution procedures set forth in this Section, the time period for completion of work and/or obligations to be performed under this Consent Order which are affected by such dispute may be extended, upon written agreement of the U.S. EPA and the Respondent, for a period of time not to exceed the actual time taken to resolve the dispute. Elements of the work and obligations not affected by the dispute shall be completed in accordance with the schedule contained in the RFI Workplan and the CMS Workplan.

F. Upon resolution of any dispute, whether informally or using the procedures in this Section, the Respondent shall proceed with the work according to the statement of dispute resolution which shall be incorporated into this Consent Order.

#### XVI. FORCE MAJEURE AND EXCUSABLE DELAY

A. The Respondent shall perform the requirements of this Consent Order within the time limits set forth herein or established hereunder, unless the performance is prevented or delayed by events which constitute a force majeure. The Respondent shall have the burden of proving such a force



majeure. A force majeure is defined as any event arising from causes not foreseeable and beyond the control of the Respondent which could not be overcome by due diligence and which delays or prevents performance by a date required by this Consent Order. Such events do not include increased costs of performance, changed economic circumstances, normal precipitation events, or failure to obtain Federal, State, or local permits.

B. The Respondent shall notify the U.S. EPA in writing within seven (7) days after it becomes aware of events which the Respondent knows or should know constitute a force majeure. Such notice shall estimate the anticipated length of delay, including necessary demobilization and remobilization, the cause of the delay, measures taken or to be taken to minimize the delay, and an estimated time table for implementation of these measures. Failure to comply with the notice provision of this Section shall constitute a waiver of the Respondent's right to assert a force majeure.

C. If the U.S. EPA determines that the delay has been or will be caused by circumstances not foreseeable by and beyond the control of the Respondent, and which could not have been overcome by the Respondent's exercise of due diligence, the time for performance of that element of the work to be performed pursuant to this Consent Order may be extended, upon U.S. EPA approval, for a time period equal to the delay resulting from such circumstances. The extension of time shall be accomplished through an amendment to this Consent Order pursuant to Section XXI. Such an extension of time does not alter the schedule for performance or completion of other tasks required by any Scope of Work or otherwise required by this Consent Order unless the schedule for these other tasks is also specifically altered by the

amendment of this Consent Order. In the event that the U.S. EPA and the Respondent cannot agree that any delay or failure has been or will be caused by circumstances not reasonably foreseeable by and beyond the control of the Respondent, and which could not have been overcome by the Respondent's exercise of due diligence, or in the event there is no agreement on the length of the extension, the dispute shall be resolved in accordance with the Dispute Resolution provisions of Section XV of this Consent Order.

XVII. RESERVATION OF RIGHTS

A. The U.S. EPA expressly reserves all rights and defenses that it may have, including the right both to disapprove of work performed by the Respondent pursuant to this Consent Order and to request that the Respondent perform tasks in addition to those stated in the Scopes of Work.

B. The U.S. EPA hereby reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to the Respondent's failure to comply with any of the requirements of this Consent Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. §6928(h)(2). This Consent Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers or authorities, civil or criminal, which the U.S. EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law enforcement authority of the United States.

C. Compliance by the Respondent with the terms of this Consent Order shall not relieve the Respondent of its obligation to comply with RCRA or any other applicable Federal, State, or local laws and regulations.

D. The entry of this Consent Order and the Respondent's consent to comply shall not limit or otherwise preclude the U.S. EPA from taking additional enforcement action pursuant to Section 3008(h) of RCRA should the U.S. EPA determine that such actions are warranted.

E. This Consent Order is not intended to be nor shall it be construed to be a permit. This Consent Order does not relieve the Respondent of any obligation to obtain and comply with any Federal, State, or local permits.

F. The U.S. EPA reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, response actions, and corrective actions as it deems necessary to protect human health and the environment. The U.S. EPA may exercise its authority under CERCLA to undertake removal actions or remedial actions at any time. The U.S. EPA reserves its right to seek reimbursement from the Respondent for such additional costs incurred by the United States. Notwithstanding compliance with the terms of this Consent Order, the Respondent is not released from liability, if any, for the costs of any response actions taken by the U.S. EPA.

#### XVIII. OTHER CLAIMS AND PARTIES

Nothing in this Consent Order shall constitute or be construed as a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of, or relating in any way to, the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous wastes, hazardous constituents, hazardous substances, pollutants or contaminants found at, taken to, or taken from the Facility.

XIX. OTHER APPLICABLE LAWS

All action required to be taken by the Respondent pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable Federal, State, and local laws and regulations. The Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

XX. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

The Respondent agrees to indemnify, save, and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of the Respondent, or its agents, independent contractors, receivers, trustees, and assigns, in carrying out the activities required by this Consent Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of the Respondent or the United States under their various contracts.

XXI. SUBSEQUENT MODIFICATION

A. This Consent Order may be amended only by mutual agreement of the U.S. EPA and the Respondent. Such amendments shall be in writing, shall be signed by both parties, shall have as their effective date the date on which they are signed by the U.S. EPA, and shall be incorporated into this Consent Order.

B. Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by the U.S. EPA as provided for in Section VI of this Consent Order, incorporated into this Consent Order. Any

noncompliance with such reports, plans, specifications, schedules, and attachments approved by the U.S. EPA shall be considered a violation of this Consent Order and shall subject the Respondent to the stipulated penalty provisions included in Section XIV of this Consent Order.

C. No informal advice, guidance, suggestions, or comments by the U.S. EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondent will be construed as relieving the Respondent of its obligation to obtain written approval, if and when required by this Consent Order.

#### XXII. SEVERABILITY

If any provision or authority of this Consent Order or the application of this Consent Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Consent Order shall remain in force and shall not be affected thereby.

#### XXIII. TERMINATION AND SATISFACTION


The provisions of this Consent Order shall be deemed satisfied upon the Respondent's receipt of written notice from the U.S. EPA that the Respondent has demonstrated to the satisfaction of the U.S. EPA that the terms of this Consent Order, including any additional tasks determined by the U.S. EPA to be required pursuant to this Consent Order or any continuing obligations or promises (e.g., Record Retention, Reservation of Rights), have been satisfactorily completed.

XXIV. EFFECTIVE DATE

The effective date of this Consent Order shall be the date on which it is signed by the Director, Waste Management Division, U.S. EPA, Region V.

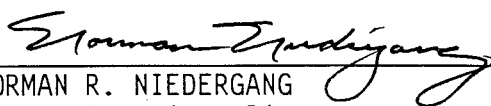
Because the Order was entered with the consent of both parties, the Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. §6928(b).

IT IS SO AGREED:

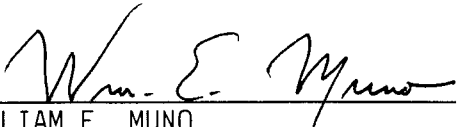
BY:   
Techalloy Company, Inc.

Date 1/11/93

~~DAY OF \_\_\_\_\_, 1992.~~ WEM

BY:   
NORMAN R. NIEDERGANG  
Acting Associate Director  
Office of RCRA  
Waste Management Division  
U.S. Environmental Protection Agency  
Region V, Complainant

IT BEING SO AGREED, IT IS HEREBY ORDERED THIS 1/27/93

BY:   
WILLIAM E. MUNO  
Acting Director  
Waste Management Division  
U.S. Environmental Protection Agency  
Region V

Administrative Order on Consent

U.S. EPA I.D. #ILD 005 178 975

EXHIBIT A

1. **Non-responsive**

2. **Non-responsive**

3. **Non-responsive**

4. **Non-responsive**

5. **Non-responsive**

6. **Non-responsive**

7. **Non-responsive**

**ATTACHMENT I**  
**SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION**  
**AT**  
**TECHALLOY COMPANY, INC.**  
**Union, Illinois**

**PURPOSE**

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of the release of hazardous waste or hazardous constituents from regulated units, solid waste management units, and other source areas at the Facility, and to gather necessary data to support the Corrective Measures Study. Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RCRA Facility Investigation at Techalloy Company, Inc., Union, Illinois.

**SCOPE**

The RCRA Facility Investigation consists of six tasks:

Task I: Description of Current Conditions

- ✓A. Facility Background
- B. Nature and Extent of Contamination
- C. Implementation of Interim Measures (optional)

Task II: Pre-Investigation Evaluation of Corrective Measure Technologies

Task III: RFI Workplan Requirements

- A. Project Management Plan
- B. Quality Assurance Project Plan (QAPjP)
- C. Data Management Plan
- D. Health and Safety Plan
- E. Community Relations Plan

Task IV: Facility Investigation

- A. Environmental Setting
- B. Source Characterization
- C. Contamination Characterization
- D. Potential Receptors

Task V: Investigation Analysis

- A. Data Analysis
- B. Protection Standards



Task VI: Reports

- A. Preliminary and Workplan
- B. Progress
- C. Draft and Final

TASK I: DESCRIPTION OF CURRENT CONDITIONS

Respondent shall submit for U.S. EPA approval, a report providing the background information pertinent to the facility and contamination as set forth below. The data gathered during any previous investigations, and other relevant data shall be included.

A. Facility Background

Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage, or disposal of solid and hazardous waste. Respondent's report shall include:

1. Maps depicting the following:

- a. General geographic location;
- b. Property lines with owners of all adjacent property clearly indicated;
- c. Topography and surface drainage depicting all waterways, wetlands, floodplains, water features, drainage patterns, and surfacewater containment areas;
- d. All tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;
- e. All solid or hazardous waste treatment, storage, or disposal areas active after November 19, 1980;
- f. All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980;
- g. All known past and present product and waste underground tanks or piping;
- h. Surrounding land uses (residential, commercial, agricultural, recreational);
- i. The location of all past and present production, recovery and groundwater monitoring wells. These wells shall be clearly labeled, and ground and top of casing elevations and construction details included. These elevations and details may be included as an attachment which outlines well depth, aquifer(s) screened, screen length, screen interval (AMSL), well diameter, well material and openhole or sand/gravel pack interval (AMSL); and
- j. Terrestrial Habitat Cover - Types (i.e. vegetation communities).

All maps shall be consistent with the requirements set forth in 40 CFR 270.14 and be of sufficient detail and accuracy to locate and report all current and future work performed at the site.

2. A history and description of the ownership and operation, solid and hazardous waste generation, treatment, storage, and disposal activities at the facility.
3. Exact dates or approximate periods of past product and waste spills or deposits, identification of the materials spilled, the amount spilled, the amount recovered, the location where spilled, media impacted, and a description of the response actions conducted (local, State, or Federal response units or private parties), including any inspection reports or technical reports generated as a result of the response.
4. A summary of past and present environmental permits requested and/or received, any enforcement actions and their subsequent responses, and a list of documents and studies prepared for the facility.
5. Description of major habitat types (e.g., grasslands, forests, lakes, streams, wetlands) located in, adjacent to, or affected by the facility. In delineating wetlands, the U.S. Fish and Wildlife Service's National Wetland Inventory maps should be consulted. In addition, if the facility is located in Michigan, the Michigan Department of Natural Resources (MDNR) should be consulted, and wetlands should be delineated using the MDNR Wetland Determination Manual. If the facility is located in another state, the U.S. Army Corps of Engineers should be consulted and wetlands should be delineated using the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (This manual is currently undergoing revision. Until the revision is finalized, the Corps should be consulted to determine which wetland delineation manual should be utilized.).
6. Description of plants and animals at and adjacent to the site. Should include the following: qualitative observations of resident plants and animals (birds, mammals, fish, stream benthos, etc.); classification of vegetation community types. Threatened and endangered species possibly on or near the site should be identified as early as possible.

B. Nature and Extent of Contamination

Respondent shall prepare and submit for U.S. EPA approval, a preliminary report describing the existing information on the nature and extent of contamination.

1. Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, spillage areas, and other suspected source areas of contamination. For each area, Respondent shall identify the following:
  - a. Location of unit/area (which shall be depicted on a facility map);
  - b. Quantities of solid and hazardous wastes present;
  - c. Hazardous waste or constituents, to the extent known; and
  - d. Identification of areas where additional information is necessary.
2. Respondent shall prepare an assessment and description of the existing degree and extent of contamination. This should include:
  - a. Available monitoring data and qualitative information on locations and levels of contamination at the facility;
  - b. All potential migration pathways including information on geology, pedology, physiography, hydrogeology, physiography, hydrology, water quality, meteorology, air quality, and migration through food chains; and
  - c. Any known or observed effects of site contaminants to biota, such as fish kills, stressed vegetation, or other obvious impacts.
  - d. Potential impacts of contaminants on human health and the environment, including demography, groundwater and surface water use, land use, and potential ecological receptors, including any threatened and endangered species. This assessment should be based on existing site information, literature-based information on contaminant fate and toxicity, and available criteria and standards (e.g., Ambient Water Quality Criteria).

C. Implementation of Interim Measures

If an interim measure is determined to be necessary, Respondent shall prepare and submit for approval, an Interim Measures Workplan in accordance with Appendix I to this Scope of Work.

TASK II: PRE-INVESTIGATION EVALUATION OF CORRECTIVE MEASURE TECHNOLOGIES

Prior to starting the facility investigation, the Respondent shall submit to U.S. EPA a report that identifies the potential corrective measure technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination from the Facility. This report shall also identify any field data that needs to be collected in the facility investigation to facilitate the evaluation and selection of the final corrective measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

TASK III: RFI WORKPLAN REQUIREMENTS

Respondent shall prepare a RCRA Facility Investigation (RFI) Workplan. The RFI Workplan shall include the development of several plans, which shall be prepared concurrently. During the RCRA Facility Investigation, it ~~may~~ be necessary to revise the RFI Workplan to increase or decrease the detail of information collected to accommodate the facility specific situation. The RFI Workplan includes the following:

A. Project Management Plan

Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and personnel. The Project Management Plan also will include a description of the qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall document the overall management approach to the RCRA Facility Investigation.

B. Quality Assurance Project Plan (QAPjP)

Respondent shall prepare a plan to document all monitoring procedures, sampling, field measurements and sample analyses performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. The QAPjP shall be prepared in accordance with Attachment IV. A pre-QAPjP meeting shall be held prior to preparation of the QAPjP. Participants should include, but are not limited to the Respondent, their QAPjP preparer, laboratory representatives, U.S. EPA Project Coordinator, U.S. EPA Quality Assurance and Laboratory representatives.

(A performance audit will be conducted by U.S. EPA on laboratories selected by Respondent. This audit must be completed and laboratories approved for use on the project prior to the start of field work for the RFI.)

C. Data Management Plan

Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

All groundwater data shall be submitted in a computer accessible format, i.e., diskette. The format used shall be compatible with the U.S. EPA, Region V groundwater database known as the Ground Water Information Tracking System (GRITS), Version 4.0.

## 1. Data Record

The Data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement location and sample or measurement type;
- c. Sampling or field measurement raw data;
- d. Laboratory analysis ID number;
- e. Property or component measured; and
- f. Result of analysis (e.g., concentration).

## 2. Tabular Displays

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. Results for each medium, or for each constituent monitored;
- c. Data reduction for statistical analysis;
- d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- e. Summary data.

## 3. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- a. Display sampling location and sampling grid;
- b. Indicate boundaries of sampling area, and areas where more data are required;
- c. Display levels of contamination at each sampling location;
- d. Display geographical extent of contamination;
- e. Display contamination levels, averages, and maxima;

- f. Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and
- g. Indicate features affecting intramedia transport and show potential receptors.

D. Health and Safety Plan

Respondent shall prepare a Health and Safety Plan.

1. The Health and Safety Plan shall:

- a. Provide a facility description, including availability of resources such as roads, water supplies, electricity and telephone service;
- b. Describe the known hazards and evaluate the risks associated with the incident and with each activity conducted;
- c. List key personnel and alternates responsible for site safety, response operations, and for protection of human health;
- d. Delineate work area;
- e. Describe levels of protection to be worn by personnel;
- f. Establish procedures to control site access;
- g. Describe decontamination procedures for personnel and equipment;
- h. Establish site emergency procedures;
- i. Address emergency medical care for injuries and toxicological problems;
- j. Describe requirements for an environmental surveillance program;
- k. Specify any routine and special training required for responders; and
- l. Establish procedures for protecting workers from weather-related problems.



2. The Facility Health and Safety Plan shall be consistent with:

- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
- b. U.S. EPA Order 1440.1 - Respiratory Protection;
- c. U.S. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
- d. Facility Contingency Plan;
- e. U.S. EPA Standard Operating Safety Guide (1984);
- f. OSHA regulations, particularly those in 29 CFR 1910 and 1926;
- g. State and local regulations; and
- h. Other U.S. EPA guidance as provided.

E. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

#### TASK IV: FACILITY INVESTIGATION

Respondent shall conduct those investigations necessary to: characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors (Potential Receptor Identification). The investigations should result in data of adequate technical content to support the development and evaluation of the corrective measure alternatives during the Corrective Measures Study.

The site investigation activities shall follow the plans set forth in Task III. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

##### A. Environmental Setting

Respondent shall collect information to supplement and verify existing information on the environmental setting at the facility. Respondent shall characterize the following:

##### 1. Hydrogeology

Respondent shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the facility, including:
  - i) Regional and facility specific stratigraphy: description of strata including strike and dip; and identification of stratigraphic contacts;
  - ii) Structural geology: description of local and regional structural features (e.g., folding, faulting, tilting, jointing, etc.);
  - iii) Depositional history;
  - iv) Identification and characterization of areas and amounts of recharge and discharge;
  - v) Regional and facility specific groundwater flow patterns; and
  - vi) Seasonal variations in the groundwater flow regime;
- b. An analysis of any topographic features that might influence the groundwater flow system;

- iv) Any temporal changes in hydraulic gradients, for example due to tidal or seasonal influences; and
- f. A description of man-made influences that may affect the hydrogeology of the site, identifying:
  - i) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and
  - ii) Man-made hydraulic structures (pipelines, French drains, ditches, unlined ponds, septic tanks, NPDES outfalls, retention areas, etc.).

## 2. Soils

Respondent shall conduct a program to characterize the soil and rock units ~~above~~ the water table in the vicinity of the contaminant releases. Such characterization shall include but not be limited to, the following information:

- a. SCS soil classification;
- b. Surface soil distribution;
- c. Soil profile, including ASTM classification of soils;
- d. Transects of soil stratigraphy;
- e. Hydraulic conductivity (saturated and unsaturated);
- f. Relative permeability;
- g. Bulk density;
- h. Porosity;
- i. Soil sorptive capacity;
- j. Cation exchange capacity (CEC);
- k. Soil organic content;
- l. Soil pH;
- m. Particle size distribution;
- n.) Depth of water table;
- o. Moisture content;
- p. Effect of stratification on unsaturated flow;

- q. Infiltration;
- r. Evapotranspiration;
- s. Storage capacity;
- t. Vertical flow rate; and
- u. Mineral content.

3. Surface Water and Sediment

Respondent shall conduct a program to characterize the surface water bodies in the vicinity of the facility. Such characterization shall include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
  - i) For lakes: location, elevation, surface area, inflow, outflow, depth, temperature stratification, volume, and a description of substrate and cover;
  - ii) For impoundments: location, elevation, surface area, depth, volume, freeboard, and purpose of impoundment;
  - iii) For streams, ditches, wetlands, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (i.e., 100 year event), and a description of substrate and surface cover.
  - iv) Drainage patterns; and
  - v) Evapotranspiration;
- b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients ( $\text{NH}_3$ ,  $\text{NO}_3^-/\text{NO}_2^-$ ,  $\text{PO}_4^{3-}$ ), chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc; and
- c. Description of sediment characteristics including:
  - i) Depositional area;
  - ii) Thickness profile; and

- iii) Physical and chemical parameters (e.g., grain size, distribution, density, organic carbon content, ion exchange capacity, pH, etc., and other parameters as directed by U.S. EPA.

#### 4. Air

Respondent shall provide information characterizing the climate in the vicinity of the facility. Such information shall include, but not be limited to:

- a. A description of the following parameters:
  - i) Annual and monthly rainfall averages;
  - ii) Monthly temperature averages and extremes;
  - iii) Wind speed and direction;
  - iv) Relative humidity/dew point;
  - v) Atmospheric pressure;
  - vi) Evaporation data;
  - vii) Development of inversions; and
  - viii) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence; and
- b. A description of topographic and man-made features which affect air flow and emission patterns, including:
  - i) Ridges, hills, or mountain areas;
  - ii) Canyons or valleys;
  - iii) Surface water bodies (e.g., rivers, lakes, bays, etc.);
  - iv) Wind breaks and forests; and
  - v) Buildings.

#### B. Source Characterization

Respondent shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, collected, or removed, including: type; quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e.g., facility security, and engineered barriers).

This shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal area characteristics:

- a. Location of unit/disposal area;
- b. Type of unit/disposal area;
- c. Design features;
- d. Operating practices (past and present);
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and
- h. Method used to close the unit/disposal area.

2. Waste characteristics:

- a. Type of wastes placed in each unit, including:
  - i) Hazardous classification (e.g., flammable, reactive corrosive, oxidizing or reducing agent);
  - ii) Quantity;
  - iii) Chemical composition; and
  - iv) Waste form (bulk or containerized);
- b. Physical and chemical characteristics:
  - i) Physical form (solid, liquid, gas);
  - ii) Physical description (e.g., powder, oily sludge);
  - iii) Temperature;
  - iv) pH;
  - v) General chemical class (e.g., acid, base, solvent);
  - vi) Molecular weight;
  - vii) Density;
  - viii) Boiling point;

- ix) Viscosity;
- x) Solubility in water;
- xi) Cohesiveness of the waste;
- xii) Vapor pressure; and
- xiii) Flash point; and
- c. Migration and dispersion characteristics:
  - i) Sorption;
  - ii) Biodegradability, bioconcentration, biotransformation;
  - iii) Photodegradation rates;
  - iv) Hydrolysis rates; and
  - v) Chemical transformation.

Respondent shall document the procedures used in making the above determinations.

C. Contamination Characterization

Respondent shall collect analytical data on groundwater, soils, surface water, sediment, air, and subsurface gas contamination in the vicinity of the facility. This data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of samplings, medias sampled, concentrations of contaminants found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. Respondent shall address the following types of contamination at the facility:

1. Groundwater Contamination

Respondent shall conduct a Groundwater Investigation to characterize any plumes of contamination at the facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plumes originating from the facility;
- b. The horizontal and vertical directions of contamination movement;
- c. The velocities of contaminant movement;

- d. The horizontal and vertical concentration profiles of Appendix IX constituents in the plumes;
- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement. Respondent shall document the procedures to be used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

## 2. Soil Contamination

Respondent shall conduct an investigation to characterize the contamination of the soil and rock units above the water table in the vicinity of the contaminant release. The investigation shall include the following information:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, and other factors that might affect contaminant migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contaminant movement; and
- e. An extrapolation of future contaminant movement.

Respondent shall document the procedures used in making the above determinations.

## 3. Surface Water and Sediment Contamination

Respondent shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from the contaminant releases at the facility. The investigation shall include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;



- c. The contaminant velocities;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, and specific contaminant concentrations, etc.

Respondent shall document the procedures used in making the above determinations.

#### 4. Air Contamination

Respondent shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of releases; and
- c. The chemical and physical composition of the contaminants released, including horizontal and vertical concentration profiles.

Respondent shall document the procedures used in making the above determinations.

#### 5. Subsurface Gas Contamination

Respondent shall conduct an investigation to characterize subsurface gases emitted from buried hazardous waste and hazardous constituents in the groundwater. This investigation shall provide the following information:

- a. A description of the horizontal and vertical extent of subsurface gas migration;
- b. The chemical composition of the gases being emitted;
- c. The rate, amount, and density of the gases being emitted; and
- d. Horizontal and vertical concentration profiles of the subsurface gases emitted.

Respondent shall document the procedures used in making the above determinations.

D. Potential Receptors Identification

Respondent shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems also may be needed. The following characteristics shall be identified:

1. Local uses and possible future uses of groundwater:
  - a. Type of use (e.g., drinking water source, municipal, residential, agricultural, domestic/non-potable, and industrial); and
  - b. Locations of groundwater users, including wells and discharge areas.
2. Local uses and possible future uses of surface water draining from the facility:
  - a. Domestic and municipal (e.g., potable, lawn/gardening watering);
  - b. Recreational (e.g., swimming, fishing);
  - c. Agricultural;
  - d. Industrial; and
  - e. Environmental (e.g., fish and wildlife propagation).
3. Human use or access to the facility and adjacent lands, including but not limited to:
  - a. Recreation;
  - b. Hunting;
  - c. Residential;
  - d. Commercial; and
  - e. Relationship between population locations and prevailing wind direction.
4. A demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.

5. Ecological characteristics of the facility. Data required for this may include the following:
  - a. Chemical sampling in potentially exposed habitats and reference sites.
  - b. Toxicity testing.
  - c. Tissue analyses.
  - d. Biological community assessment.
  - e. Habitat assessment of aquatic and terrestrial habitats on or potentially affected by the site.
  - f. Revised assessment of ecological impacts on receptors. Impacts should include those occurring at individual level (e.g., mortality, growth and reproductive impairments) and those occurring at higher levels of biological organization (i.e., at population, community, and ecosystem levels).

## TASK V: INVESTIGATION ANALYSIS

Respondent shall prepare an analysis and summary of all facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and the environment, and to support the Corrective Measures Study.

### A. Data Analysis

Respondent shall analyze all facility investigation data outlined in Task IV and prepare a report on the type and extent of contamination at the facility including sources and migration pathways. The report shall describe the extent of contamination (qualitative/quantitative) in relation to the background levels indicative for the area.

### B. Protection Standards

#### 1. Groundwater Protection Standards

Respondent shall provide information to support the Agency's selection/development of Groundwater Protection Standards for all of the Appendix IX constituents found in the groundwater during the Facility Investigation (Task IV).

##### a. The Groundwater Protection Standards shall consist of:

- i) Maximum Contaminants Levels (MCLs) for constituents listed in the National Primary Drinking Water Regulations (40 CFR Part 141), if the background level of the constituent is below the given MCL; or
- ii) The background level of that constituent in the groundwater; or
- iii) A U.S. EPA-approved Alternate Concentration Limit (ACL).

##### b. Information to support the Agency's subsequent selection of Alternate Concentration Limits (ACL's) shall be developed by the Respondent in accordance with U.S. EPA guidance. For any proposed ACL's, Respondent shall include a justification based upon the criteria set forth in 40 CFR 264.94(b).

##### c. Within thirty (30) days of receipt of any proposed ACL's, the U.S. EPA shall notify Respondent in writing of approval, disapproval or modifications. The U.S. EPA shall specify in writing the reasons for any disapproval or modification.

- d. Within thirty (30) days of receipt of the U.S. EPA's notification of disapproval of any proposed ACL, the Respondent shall amend and submit revisions to the U.S. EPA.

2. Other Relevant Protection Standards

Respondent shall identify and consider all relevant and applicable standards or criteria for protection of human health and the environment (e.g., National Ambient Air Quality Standards, Federally-approved State water quality standards, water quality criteria, health advisories, proposed MCLs, etc.).

TASK VI: REPORTS

Respondent shall submit to U.S. EPA the reports described below for U.S. EPA's approval. U.S. EPA's approval decision and the consequences of such a decision are addressed by Section ~~III~~ of the Order.

A. Preliminary and Workplan

Respondent shall submit to the U.S. EPA reports on Tasks I and II when it submits the RCRA Facility Investigation Workplan (Task III).

B. Progress

Respondent shall at a minimum provide U.S. EPA with signed, monthly progress reports containing:

1. A description and estimate of the percentage of the RFI completed;
2. Summaries of all findings;
3. Summaries of all changes made in the RFI during the reporting period;
4. Summaries of all contacts with representatives of local community public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

C. Draft and Final

Upon U.S. EPA approval, Respondent shall prepare a RCRA Facility Investigation Report to present Tasks IV and V. The RCRA Facility Investigation Report shall be developed in draft form for U.S. EPA review. The RCRA Facility Investigation Report shall be developed in final format incorporating comments received on the Draft RCRA Facility Investigation Report.

Three copies of all reports, including the Task I report, Task II report, Task III workplan, and both the Draft and Final RCRA Facility Investigation Reports (Tasks IV and V) shall be provided by the Respondent to U.S. EPA.

Facility Submission Summary

A summary of the information reporting requirements contained in the RCRA Facility Investigation Scope of Work is presented below.

Facility Submission	Due Date
Description of Current Situation (Task I)	60 days within the effective date of the Consent Order
Pre-Investigation Evaluation of Corrective Measure Technologies (Task II)	60 days within the effective date of the Consent Order
RFI Workplan (Task III)	90 days within the effective date of the Consent Order
Draft RFI Report and Final RFI Report	contingent on schedule imposed in Workplan
Progress Reports on Tasks I through V	Monthly

**ATTACHMENT II**  
**SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY**  
**AT**  
**TECHALLOY COMPANY, INC.**  
**Union, Illinois**

PURPOSE

The purpose of the Corrective Measures Study (CMS) is to develop and evaluate the corrective action alternatives and to recommend the corrective measures to be taken at Techalloy Company, Inc. Respondent shall furnish the personnel, materials, and services necessary to prepare the corrective measures study, except as otherwise specified.

SCOPE

The owner/operator [Respondent] shall prepare a Corrective Measures Study Work Plan which consists of four tasks:

- Task VII: Identification and Development of the Corrective Measure Alternatives
- A. Description of Current Situation
  - B. Establishment of Corrective Action Objectives
  - C. Screening of Corrective Measure Technologies
  - D. Identification of the Corrective Measure Alternatives
- Task VIII: Necessary Laboratory and Bench-Scale Studies
- Task IX: Evaluation of the Corrective Measures Alternatives
- A. Technical/Environmental/Human Health/Institutional
  - B. Cost Estimates
- Task X: Justification and Recommendation of the Corrective Measures
- A. Technical
  - B. Environmental
  - C. Human Health
- Task XI: Reports
- A. Progress
  - B. Draft
  - C. Final



## TASK VII: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE MEASURE ALTERNATIVES

Based upon the results of the RCRA Facility Investigation and consideration of the identified Preliminary Corrective Measure Technologies (Task II), Respondent shall identify, screen, and develop the alternatives for removal, containment, treatment, and/or other remediation of the contamination based on the objectives established for the corrective action.

### A. Description of Current Situation

Respondent shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Report. Respondent shall provide an update to the information presented in Task I of the RFI to the Agency regarding previous response activities and any interim measures which have been implemented at the facility. Respondent shall also make a facility-specific statement of the purpose for the response, based on the results of the RCRA Facility Investigation. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

### B. Establishment of Corrective Action Objectives

Respondent, in conjunction with the U.S. EPA, shall establish site specific objectives for the corrective action needed to protect human health and the environment. These objectives shall be based on public health and environmental criteria, information gathered during the RCRA Facility Investigation, U.S. EPA guidance, and the requirements of any applicable Federal statutes. All corrective actions concerning groundwater releases must be consistent with, and as stringent as, those required under 40 CFR 264.100.

### C. Screening of Corrective Measure Technologies

Respondent shall review the results of the RCRA Facility Investigation and reassess the technologies specified in Task II to identify any additional technologies which are applicable at the facility. Respondent shall screen the preliminary corrective measure technologies identified in Task II of the RCRA Facility Investigation and any supplemental technologies to eliminate those that may not prove feasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have several limitations for a given set of waste and site specific condition. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

D. Identification of the Corrective Measure Alternatives

Respondent shall develop the corrective measure alternatives based on the corrective action objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task II of the RCRA Facility Investigation, and as supplemented following the preparation of the RFI Report. Respondent shall rely on sound engineering practices to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective measure alternatives. The alternatives developed should represent a workable number of options that appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. Respondent shall document the reasons for excluding technologies identified in Task II, as supplemented in the development of the alternatives.

TASK VIII: LABORATORY AND BENCH-SCALE STUDIES

The Respondent shall conduct laboratory and/or bench-scale studies to determine the applicability of corrective measure technologies to facility conditions. Respondent shall analyze the technologies based on literature review, vendor contacts, and past experience to determine the testing requirements.

Respondent shall develop a testing plan identifying the types and goals of the studies, the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, Respondent shall evaluate the testing results to assess the technologies with respect to the site-specific questions identified in the test plan.

Respondent shall prepare a report summarizing the testing program and its results, both positive and negative.

#### TASK IX: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVES

Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health, and institutional concerns. Respondent shall also develop cost estimates for each corrective measure.

##### A. Technical/Environmental/Human Health/Institutional

Respondent shall provide a description of each corrective measure alternative which includes, but is not limited to the following: preliminary process flow sheets; preliminary sizing and types of construction for buildings and structures; and rough quantities of utilities required. Respondent shall evaluate each alternative in the four following areas:

##### 1. Technical

Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability, and safety.

a. Respondent shall evaluate each corrective measure alternative based on the effectiveness and useful life of the corrective measure:

- i) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristic which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and
- ii) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

b. Respondent shall provide information on the reliability of each corrective measure including its operation and maintenance requirements and demonstrated reliability:

- i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and
  - ii) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. Respondent shall evaluate whether the technologies have been used effectively under analogous conditions; whether the combinations of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- c. Respondent shall describe the implementability of each corrective measure, including the relative ease of installation (constructability) and the time required to achieve a given level of response:
- i) Constructability is determined by conditions both internal and external to the facility conditions, and includes such items as location of underground utilities, depth to water table, homogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and
  - ii) Time has two components that shall be addressed: the time it takes to implement a corrective measure; and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.
- d. Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as threats to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

## 2. Environmental

Respondent shall assess each alternative to determine its short and long-term beneficial and adverse effects on the environment. Each

alternative will be evaluated for its impact on habitat types and plant and animal receptors located in, adjacent to, or affected by the facility. Receptor impacts should include those occurring at the individual level (e.g., mortality, growth and reproductive impairments) and those occurring at higher levels of biological organization (i.e., at population, community, and ecosystem levels). The assessment should include proposed measures for mitigating adverse impacts.

### 3. Human Health

Respondent shall assess each alternative in terms of the extent to which it mitigates short and long-term potential exposure to any residual contamination and how it protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants onsite, potential exposure routes, and the potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to U.S. EPA.

### 4. Institutional

Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State, and local environmental and public health standards, regulation, guidance, advisories, ordinances, or community relation on the design, operation, and timing of each alternative.

## B. Cost Estimate

Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

### 1. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

#### a. Direct capital costs include:

- i) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation); and equipment required to install the corrective measure;
- ii) Equipment costs: Cost of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;

- iii) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and

b. Indirect capital costs include:

- i) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
- ii) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
- iii) Startup and shakedown costs: Costs incurred during corrective measure startup; and
- iv) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. Respondent shall consider the following operation and maintenance cost components:

- a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
- b. Maintenance materials and labor costs: Cost for labor, parts, and other resources required for routine maintenance of facilities and equipment;
- c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
- d. Purchased services: Sampling cost, laboratory fees, and professional fees for which the need can be predicted;
- e. Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
- f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;

- g. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or right-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
- h. Maintenance reserve and contingency funds: Annual payments into escrow to cover: (1) costs of anticipated replacement or rebuilding of equipment; and (2) any large unanticipated operation and maintenance costs; and
- i. Other costs: Items that do not fit any of the above categories.



TASK X: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURES

Respondent shall justify and recommend corrective measure alternatives using technical, human health, and environmental criteria. The recommendation shall include summary tables which allow the alternatives to be easily understood. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. The U.S. EPA will select the corrective measure alternatives to be implemented based on the results of Tasks IX and X. At a minimum, the following criteria will be used to justify the final corrective measures.

A. Technical

1. Performance - corrective measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be preferred;
2. Reliability - corrective measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be preferred;
3. Implementability - corrective measures which can be constructed and operated to reduce levels of contamination that attain or exceed applicable standards in the shortest period of time will be preferred; and
4. Safety - corrective measures which pose the least threat to the safety of nearby residents and environment as well as workers during implementation will be preferred.

B. Human Health

The corrective measures must comply with existing U.S. EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time will be preferred.

C. Environmental

The corrective measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be preferred.

## TASK XI: REPORTS

Respondent shall submit to U.S. EPA the reports described below for U.S. EPA's approval. U.S. EPA's approval decision and the consequences of such a decision are addressed by Section ~~III~~ of the Order.

Respondent shall prepare a Corrective Measures Study (CMS) Report presenting the results of Tasks VII through X and recommending corrective measure alternatives. Three (3) copies of the draft report shall be provided by Respondent.

### A. Progress

Respondent shall at a minimum provide U.S. EPA with signed, monthly progress reports containing:

1. A description and estimate of the percentage of the CMS completed;
2. Summaries of all findings;
3. Summaries of all changes made in the CMS during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups, or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

### B. Draft

The CMS Report shall, at a minimum, include:

1. A description of the facility, including a site topographic map (which includes depiction of plant communities and fish and wildlife habitat types) and preliminary layouts;
2. A summary of the corrective measures:
  - a. Description of the corrective measures and rationale for selection;

- b. Performance expectations;
  - c. Preliminary design criteria and rationale;
  - d. General operation and maintenance requirements; and
  - e. Long-term monitoring requirements to assess attainment of goals relative to groundwater, surface waters and ecological integrity (ecological monitoring, where applicable, could include assessment of wetland vegetation, soils and hydrology; biotoxicity of surface waters, soils and/or sediments; analysis of biological tissues; and assessment of stream fish and benthic macroinvertebrate communities);
- 3. A summary of the RCRA Facility Investigation and impact on the selected corrective measures;
  - 4. A summary of any necessary laboratory and bench-scale studies;
  - 5. Design and Implementation Precaution:
    - a. Special technical problems;
    - b. Additional engineering data required;
    - c. Permits and regulatory requirements;
    - d. Access, easements, right-of-way;
    - e. Health and safety requirements; and
    - f. Community relations activities; and
  - 6. Cost Estimates and Schedules:
    - a. Capital cost estimate;
    - b. Operation and maintenance cost estimate; and
    - c. Project schedule (design, construction, operation).

B. Final

Respondent shall finalize the Corrective Measures Study Report, incorporating comments received from the public and U.S. EPA on the Draft Final Corrective Measures Study Report.

Facility Submission Summary

A summary of the information requirements contained in the Corrective Measure Study Scope of Work is presented below:

Facility Submission	Due Date
CMS Workplan	30 days after submittal of the Final RFI
Draft CMS Report (Tasks VII, VIII, IX, and X)	90 days after submittal of the Final RFI
Final CMS Report (Tasks VII, VIII, IX, and X)	45 days after Public and U.S. EPA - Comments on the Draft Final CMS
Progress Reports on Tasks VII Through X	Monthly